CONCRETE







OUR 52ND YEAR
Serving the Concrete Industries

SEPTEMBER 1956





INSURANCE COMPANY OF AMERICA

Left—Prudential Insurance Bldg., Jacksonville, Fla. Archt.—Kemp, Bunch & Jackson; Contr.—Daniel Construction Co. Pazzolith Ready-Mixed Concrete supplied by Capital Concrete Co.—all of Jacksonville.

Belaw — Prudential Office Building, Minneapolis, Minn. Archt. and Engr. — Magney, Tusler & Setter: Cantr. — C. F. Maglin & Sons Co. Pozzolith Ready-Mixed Cancrete supplied by Ready-Mixed Cancrete Co. — all of Minneapolis.



Left—Prudential Building, Chicago, Illinois. Archt.-Eng.—Naess & Murphy; Contr.—Geo. A. Fuller Co.; Pozzolith Ready-Mixed Concrete supplied by Material Service Corp.—all of Chicago.

Right—Prudential Insurance Co., Los Angeles, Calif. Archts.—Walter Wurdeman and Welton Becket; Engr.—Murray Erick Associates; Gen. Contr.—Wm. Simpson Co.—all of Los Angeles. Pozzolith Ready-Mixed Concrete supplied by Transit Mixed Concrete Co. Pagadena.



POZZOLITH employed for improved control of Concrete Quality...

"for the same owner time and time again"

These outstanding Prudential office buildings are representative of the many structures—often for the same owner time and time again—where Pozzolith has proved a valuable aid in economically obtaining concrete of desired properties. This is because Pozzolith provides the following three controls required for optimum concrete performance.

- Control of water content...lowest possible unit water content for a given workability. Results in greatly improved concrete quality and economy.
- Control of entrained air...for designed strength with required durability and low permeability.
- 3. Control of rate of hardening...for speed where needed, for retardation where required—in any event good uniform concrete.

Any of our more than 75 field technical men will be glad to demonstrate the full advantages of Pozzolith for your project.

COLORED MOTION PICTURE, "The Man With The Trowel", shows how Pozzolith and its adaptations—through control of water, air and rate of hardening—greatly improve your control of concrete quality. Film available for private showing to groups of any size.



the MASTER BUILDERS co.

Division of American-Marietta Company

Cleveland 3, Ohio - Toronto 9, Ontario

Cable Address, Mastmethod, N.Y.

SEPTEMBER, 1956 CONCRETE

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FEATURES FOR THIS MONTH

Split	Units for Basement Walls						
	The attractive block that graces the upper floors of the house h	es					
	found its way downstairs and is helping block producers to w						
	some of the finished-basement market.						

How to Save Cement by Proper Grading of Aggregate 28

A careful, thorough article that tells the how and why of aggregate grading, which, if followed properly, will give the block manufacturer more block per sack of coment. By William Grant

This company has found that the best way to wash a truck is with plain water and an ingenious yoke arrangement designed to save time and money. By T. Wayne Dutton

An old firm learns new tricks to keep up with the market. Cinder Block, Inc., is proud of its new autoclaving system and its modern plant.

It will save you many headaches as well as dollars to have a customer-signed agreement on time, place and payment, and it will please the customer as well. By William H. Allen, Jr.

Here is a progress report on the contract awards for the first half of 1956 which indicates continuing prosperity for the construction field. By George Cline Smith.

Holding Time - Is Radio Communication the Best Answer? . . 40

South Florida ready-mix producers have found that two-way radios are helping them to reduce the holding-time problem in their area. Perhaps their solution will help other firms. By Porter V. Taylor

The editor takes a few pot shots at the Federal Trade Commission and the Structural Clay Products institute for the fuzzy reasoning behind a recent ruling giving the clay products industry exclusive right to use the term brick without modification.

WILLIAM M. AVERY, EDITOR

DONALD T. PAPINEAU, Publisher

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MORTAR PENN-DIXIE CEMENT

PENN-DIXIE CEMENT Corporation

PLANTS: Nazareth, Pa. Bath, Pa. Penn-Allen, Pa. West Winfield, Pa. Buffalo, N. Y. Richard City, Tenn. Kingsport, Tenn.

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KENTHREE with front pallet return is an example of modern engineering in which the factor of human fallibility is entirely eliminated.

Electric driven hydraulic members permit extreme simplification with a marked reduction in operation and upkeep costs.

The amount of material, the time of agitation and vibration, the size of the block, the forward movement of finished blocks are all controlled electronically and hydraulically.

The KENTHREE automatically delivers three 8 inch blocks or equivalent of accurate dimension and uniform density each cycle with any aggregate.

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CONCRETE PRODUCTS MACHINERY SINCE 1925

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The offbearer picks up two pallets of finished block from the automatic front pallet return and simultaneously by using a magnetic spade, drops two empty pallets into the machine, one of which moves into position at each cycle.

This advanced designing and operation gives new remarkable results with which you should be familiar.

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Send literature illustrating and describing the KENTHREE.

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THE INDUSTRY WANTED A TRUE "AIR CAVITY" BLOCK



Automatically Produced

on the world's most advanced hydraulically-operated, electronically-controlled block machines at 4 to 6 cycles per minute (depending upon the type of aggregate used). Each Presto Block is held together and reinforced by two corrugated steel ties, which feed automatically during the production cycle. Presto Blocks are produced at the same speeds—the same cost—and with the same aggregates as conventional concrete blocks.

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INSULATION. Revolutionary Presto Block-a miniature "twin wall" in itself-is the only single-unit block to build a true air-cavity wall...with no masonry bond ... providing the finest SOUND, CLIMATIC AND MOISTURE INSULA-TION AVAILABLE TODAY!

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Empire State Building, New York, N. Y. Phone CHickering 4-7288



Here, ease of Presto Black twin-wall construction is demonstrated. Blocks are self-aligning, with end, top, bottom surfaces keyed to lock upon erection.

cavity" building unit that

combines the economy and erection speed of

dry-wall construction with complete twin-wall insu-

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DYNAMIC

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But when you have ample bulk cement storage bins you:

- increase your yearly quota by heavy cement purchases in January, February and March (when the price is favorable, too.);
- (2) you have cement when competition has to shut down or pay profit-robbing prices;
- (3) you fill your orders on time and win firm and grateful customers;
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- (5) and you'll often pay off your investment in BUTLER Cement Bins in one year.

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Profits Through Vibrapac Agreement Prompted this New England Plant to Order 2 Additional Vibrapacs!

When the Duracrete Block Company of Manchester, New Hampshire decided to expand their block making activities in 1949, they selected a Besser Vibrapac under the Vibrapac Agreement Plan. The operation of this first machine was so successful, the company has since ordered two additional Vibrapacs, also under the Vibrapac Agreement Plan.

Substant profits were realized without any material rease in plant investment. The production of premium block, plus an aggressive merchandising campaign, greatly increased the acceptance of quality concrete masonry in this area.

Yes, Vibrapacs are profit-making machines because they produce

quality block and operate continuously, day after day, without "downtime". In the words of D. V. Donati, President of the Duracrete Company, "There are none better than the Vibrapac. It's the finest block machine made."

Write for literature

• One of the three Vibrapacs, a front pallet feed model. Fully automatic. Off-bearer merely guides the Besser Power Hoist.

 D. V. Donati, President of the Duracrete Block Company and Arthur Donati, Foreman, writing up an order for Vibrapac Block.

 This beautiful home was built with Bes-Stone Split Black produced in the Duracrete plant.

 Yard scene at Duracrete. In addition to conventional units, they else produce manhole and catch basin black, Bes-Stone Split Block, Soffit Floor Units, chimney block, etc.



BESSER COMPANY · Box 127, Alpena, Mich., U.S.A.

Complete Equipment for Concrete Block Plants

A 8895-1PBC

First in concrete block machines!





on every pour

with TRANSCRETE®

MIXES BETTER CONCRETE - FASTER

Extra large diameter drum head plus deep "L" section blades for more mixing action per each drum revolution.

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Exclusive CMC Swing-Out Hopper swings out for discharge so concrete can come through big UNOBSTRUCTED opening in full, easily controlled stream.

TROUBLE-FREE OPERATION

Only TRANSCRETE has the CMC Floating Drive that absolutely eliminates all the troubles of ordinary rigid drives.

4 Models - 31/2 to 7 yard capacities



For complete information on TRANSCRETES... contact your local CMC distributor... or write us

CONSTRUCTION MACHINERY COMPANY . Waterloo, Iowa

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LOW INVESTMENT COSTS! LOW MAINTENANCE COSTS!

They like to talk about quality, too...the combined quality of experience and engineering know-how that enables you to produce superior concrete masonry products . . . at the lowest per-unit cost in the industry!

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Simplicity of design and construction combines with positive hydraulic principles to give the Columbia machine its great economy of original cost. For example, Columbia's famous Model 8 including pallet feeder, mold, feed box agitator, electronic controls and panel, all motors and switches, pumping unit and electronic height and density control is priced as low as \$10,385 F.O.B. VANCOUVER

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Columbia's positive hydraulic principles eliminate cams, levers, gears, belts, pulleys, gear head motors, shear pins and other costly wearing parts, to keep maintenance costs at an absolute minimum. All other parts are completely covered to seal off grit of plant operation. One Columbia user* reports a per-unit maintenance cost of 1/10th cent on 1,600,000 equivalent units.

If you are planning a plant expansion, a new plant or want to add concrete block production to your present business, call us today at our expense. We will have a qualified man in your plant within 24 hours. No obligation! Phone OXford 4-1501.

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the Water Heater you need for your Gear round redi-mix plant





• Freezing temperatures need not put a damper on your concrete mixing activities. The answer to this predicament-mix with hot water so that the concrete can "set" before it freezes; and heat your mixing water with a dependable, gas-fired Burkay Water Heater.

Burkays have many natural advantages for this use. They are light, compact, easy to install, and may be put in out-of-the-way places. They are portable, practically service-free, are flexible as to installing additional units.

The usual Burkay installation consists of a heater plus storage tank (recovery system) to supply a large volume of one-temperature hot water; smaller installations may use instantaneous heaters.

See your nearest A. O. Smith Burkay distributor for information.



PERMAGLAS DIVISION



Model 718

- A High-Recovery Water Heater—403 gal. per hr. at 100° rise. May be in-stalled in multiple to meet larger needs.
- Remarkable operating
- Instant response to load
- All copper waterways guarantee no corrosion and long life.
- · Compact. Easy to install.
- Trouble-free. All gases.
- Burkays are light, compact. Easily fit overhead in out-of-the-way places.

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A. O. SMITH CORPORATION

Permaglas Division, Kankakee, Illinois, Dept. C-956 Please send me helpful data on water heaters for Redi-Mix Plants.

Name.....Title.....

Company.....

City.....Zone....State..

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LOW INVESTMENT COSTS! LOW MAINTENANCE COSTS!

They like to talk about quality, too...the combined quality of experience and engineering know-how that enables you to produce superior concrete masonry products . . . at the lowest per-unit cost in the industry!

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Simplicity of design and construction combines with positive hydraulic principles to give the Columbia machine its great economy of original cost. For example, Columbia's famous Model 8including pallet feeder, mold, feed box agitator, electronic controls and panel, all motors and switches, pumping unit and electronic height and density control is priced as low as \$10,385

AND KEEP SAVING WITH LOWER MAINTENANCE

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No obligation! Phone OXford 4-1501.

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for your Geor round redi-mix plant





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See your nearest A. O. Smith Burkay distributor for information.



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PERMAGLAS DIVISION . KANKAKEE, ILLINOIS



Model 718

- A High-Recovery Water Heater—403 gal, per hr. at 100° rise. May be installed in multiple to meet larger needs.
- Remarkable operating economy.
- Instant response to load demands.
- All copper waterways guarantee no corrosion and long life.
- · Compact. Easy to install.
- Trouble-free. All gases.
- Burkays are light, compact.
 Easily fit overhead in out-of-the-way places.

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Permaglas Division, Kankakee, Illinois, Dept. C-956
Please send me helpful data on water heaters for Redi-Mix Plants.

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City.....Zone....State.....

2-WAY RADIO

makes satisfied customers for Travers Supply Co. of Decatur, III.



HERE'S HOW RADIO HELPS YOU

John Stoune, Travers' manager, was arriving at a job in his radio equipped station wagon. Dispatcher Jim Mosser radioed, wondering about a gravel truck due on the job. Stoune answered, "He's dumping the load now—should be back in 20 minutes." Dispatcher Mosser knew exactly when he could schedule that truck for another job. A mixer returning to the plant was heard reporting mechanical trouble. A service truck was immediately sent to him and a spare truck dispatched to fill his next order—as much as an hour saved, not to mention the finisher's temper if he had run out of cement.

If forms aren't ready, the dispatcher gets the report in 30 seconds and can direct the mixer to another site nearby. When an estimate runs short, a fast radio call—direct from the job—gets the concrete there to finish the job. Loose ends at the end of the day are cleaned up easier with radio—drivers and batch plant men get home on time, and expensive overtime payroll is slashed.

With constant dispatcher contact and control, every truck does a bigger job every day, making a more efficient, more profitable operation. And customers are kept serviced, happy and loyal.

HERE'S WHY MOTOROLA DOES THE JOB BETTER

Direct from the site, Ralph Calfee radios dispatcher John Mosser that another yard is needed to complete the job.

Motorola consistently supplies more mobile and portable radio than all others combined ... proof of acceptance, experience and quality. The only COMPLETE radio communications service—specialized engineering ... product ... customer service ... parts ... installation ... maintenance ... finance ... lease.

VERSATILE—Motorola produces the greatest variety of 2-way radio equipment available—equipment that can be combined to form a custom-made system at production line prices.

RUGGED—It is built to take the severe beating that any ready-mix work imposes on it—proven in use for long life, dependability and economy.

SERVICE—There is a Motorola Service Station near you. Motorola offers the most complete national service set-up—700 Authorized Service Stations, on call 24 hours a day.

TERMS—You can have Motorola 2-way radio on purchase, time payment, or lease (with or without equity).

Get the full facts from a Motorola Communications Engineer. Write, phone or wire TODAY!



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MOTOROLA

COMMUNICATIONS & ELECTRONICS, INC.

A Subsidiary of Motorola, Inc., 4501 Augusta Boulevard, Chicago 51, Illinois



(R) TRADEMARK REGISTERED

This is a Smith INTEGRAL with front end power takeoff — one engine and one frame for both truck and mixer.

The photo has been cut away to show the drive shaft arrangement on the chain drive Integral.

Engine speed is reduced at the transfer case before the power goes into the shafts.

This means a slower shaft speed, which cuts wear tremendously on universal joints and bearings.

result? Exceptionally long life, and astonishingly low maintenance cost.

other features of the SMITH INTEGRAL

- Shorter center of gravity for better weight distribution.
- · Lower height.
- · Choice of integral mount, or with separate frame.
- · Choice of chain or gear drive.
- Choice of sizes: 4½, 5½, and 6½ cubic yards (all with front end PTO).

For more information, contact your nearest Smith distributor, or write to the company.

THE T. L. SMITH COMPANY, Milwaukee 45, Wisconsin; Lufkin, Texas

Since 1900, the pioneer designer and foremost manufacturer of the world's finest mixers Affiliated with Essick Manufacturing Company, Los Angeles, Calif.



POURING 2300' DOWN A MOUNTAIN IN A 6" PIPE: To pour anchor blocks for a new 24" water line to Colorado Springs, General Concrete's new Jaeger truck mixers climbed 9700' up Pike's Peak (a 17 mile haul that took about 80 minutes)

then spent 40 minutes carefully discharging each 5 yd. batch down 2300' of 6" pipe. The 1100' fall of the pipe carried the 5" slump material by gravity. The pipe was flushed with water after each use.



Three mixers made the 235 yd. pour. "Handled the long haul and difficult pour in fine shape, with very satisfactory con-

crete", states Guy M. Elder Jr., of Guy Elder Construction Co., Denver contractors.



POURING HIGH, DRY AND MIGHTY FAST: The same Jaeger mixers that could dribble concrete down a 6" pipe at the rate of 8 minutes per yard, made quick work of discharging 2" slump concrete that was so stiff it had to be

vibrated from the bucket. Job is pressure conduit under relocated U. S. Highway 85-87, near new U. S. Air Force Academy at Colorado Springs. Mountain States Construction Co., contractors.

You can do more with a 3-speed Jaeger

Like every other exclusive Jaeger operating feature, 3-speed transmission makes truck mixers more adaptable to job conditions and faster moving on the payload trip.

Within efficient engine speed range of 800 to 2000 rpm, you can fast-charge with drum at 16 rpm, shift down slow as 1½ rpm for long haul agitation, or adjust engine and drum speeds to discharge the stiffest concrete under any condition the job may call for. Enlarged diameter loader throat and 25% larger discharge blades also help to out-charge and out-discharge other mixers—often by actual minutes on low slump mixes.

Today's Jaeger mixers are also notable for their short center of gravity—for example, Jaeger 51/2 yd. with rated

load has 69" c/g versus up to 77" in other makes. And you have your choice of transmission, loader, water system and other equipment to fit your needs, with either separate engine or cab-controlled truck engine drive. For complete details, ask your Jaeger distributor—or write us.

THE JAEGER MACHINE COMPANY

50 year

522 Dublin Avenue, Columbus 16, Ohio

COMPRESSORS . PUMPS . MIXERS . PAVING SPREADERS, FINISHERS



FASTER THAN RABBITS: General Concrete put their first 5 new Jaegers in service in February. Now they have 10.

STRONGER CONCRETE BETTER CURING

WITH COLUMBIA CALCIUM CHLORIDE



Columbia Calcium Chloride can be added to the mix either at the plant or job site.



Blocks are taken from drying kiln. Columbia Calcium Chloride is used the year 'round.

IN READY MIX. Ready mix producers can do a real service for customers by suggesting the use of Columbia Calcium Chloride in the mix. Calcium Chloride is excellent for hot weather and fall use because it more than doubles the one day strength of concrete. In three days the strength is 50% greater. Translated into practical field application, this means earlier removal of forms and faster construction schedules.

Curing is also considerably improved by the addition of Columbia Calcium Chloride. At the early ages of setting, when the retention of moisture is extremely important, non-treated concrete loses 60% of the original mixing water in the first 225 minutes, while Calcium Chloride treated concrete loses only half as much!

Always recommend the addition of Columbia Calcium Chloride to your ready mix customers. The cold weather advantages are even more pronounced. IN CONCRETE PRODUCTS. No matter what your concrete products... blocks, pipe or precast... the use of Columbia Calcium Chloride will improve production and lower manufacturing costs. These advantages apply to quality concrete products, with or without steam curing.

The initial set is reduced more than 50 per cent. Three day strength is achieved within 24 hours. This reduces the number of cracked units and permits less damage in earlier handling periods, quicker removal from pallets, reduced pre-steam wait, faster more dependable curing.

Concrete units reach higher ultimate strength. This means earlier delivery, smaller inventory, lower manufacturing costs, greater profits for you.

Throughout the year, Columbia Calcium Chloride gives you better products, in shorter time, at less cost. Columbia Calcium Chloride works equally well with normal, air entrained, or early high strength cements.

Write today for complete information...Please specify whether your interest is in ready mix or concrete products

COLUMBIA-SOUTHERN CHEMICAL CORPORATION

SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY ONE GATEWAY CENTER - PITTSBURGH 22 - PENNSYLVANIA



DISTRICT OFFICES: Cincinnati • Charlotte • Chicago • Cleveland Boston • New York • St. Louis • Minneapolis • New Orleans Dallas • Houston • Pittsburgh • Philadelphia • San Francisco IN CANADA: Standard Chemical Limited and its Commercial Chemicals Division

LITH-I-BLOCK'S MODERN FEATURES MEAN MORE HIGH QUALITY PRODUCTION AT LOWEST COST

ROTA-POSED® AGITATION — Interlocking fingers on three rotating shafts fill mold in a fraction of former time.

MICRO-JUSTABLE® VIBRATION—Calibrated weights adjustable to any vibration intensity desired.

HYDRAULIC POWER PACKAGE — 12.5% more power than used with other hydraulic block machines.

GUIDED PALLET SUPPORT AND STRIPPER — Extra heavy shafts guide vertical travel for perfect alignment.

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QUICK CHANGE MOLD BOX — Change over to another size block in twenty minutes, or less.

FRONT PALLET RETURN — One man operation with optional automatic front pallet return, right or left hand models.





SALES AND SERVICE THE WORLD OVER

LITH-I-BAR COMPANY

HOLLAND . MICHIGAN

ONE PIECE OF EQUIPMENT OR A COMPLETE PLANT LAYOUT

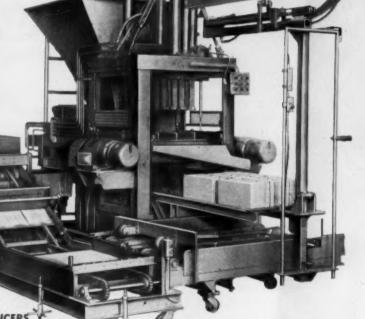
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YOUR CHOICE OF

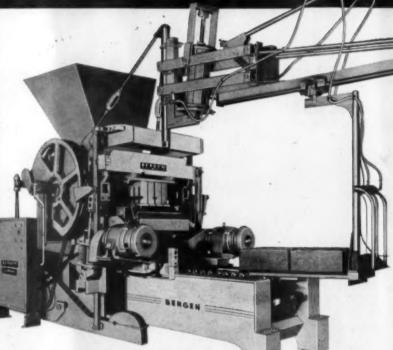
HYDRAULIC or AIR POWER

IN EITHER

2 or 3-BLOCK MODELS



NO BETTER Block Machine than a TRI-MATIC



power,
ruggedness
and
production

CHOOSE YOUR TERMS:-

1. CASH

2. TIME PAYMENTS

3. "LEASE-WITH-OPTION-TO-BUY" CONTRACT

(NON-ROYALTY, FIXED MONTHLY PAYMENT)



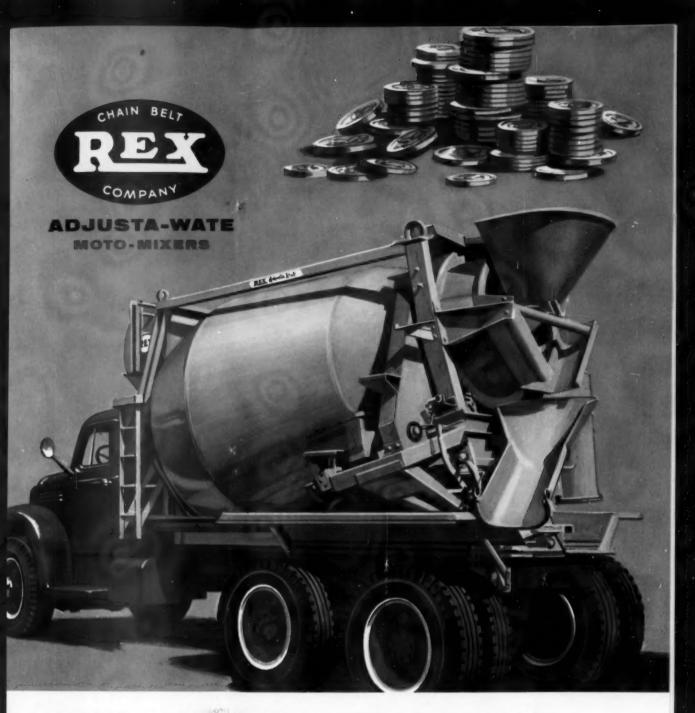
No block machine on the market today exceeds the TRI-MATIC for the essential features of heavy-duty construction, designed for and producing the finest block at maximum speed.

If you want high production, Tri-Matic is designed to run without strain at rates up to 6 mold cycles per minute, yielding an average of 10,000 — 8" equivalent units per typical 10 hour day. If you want power and ruggedness, just check the size of all motors, shafts, pulleys, etc. . . AND — not one ounce of quality workmanship or material is sacrificed ANYWHERE on a TRI-MATIC.

Compare a TRI-MATIC WITH ANY MACHINE ON THE MARKET—you'll see why the BERGEN TRI-MATIC can't be beat!

NUTLEY, NEW JERSEY

Cobie Address: "BERGENCO" (Notley, N. 1.)



What's the "Price Tag" on Leadership?...

Actually no price can measure the value of Rex leadership ... the design and performance contributions that have pioneered virtually every development in truck mixers. To you, the ready-mix operator, there is no "price tag" on this leadership ... you pay no premium to get the finest!

To Rex, the price of leadership is substantial. We must always go first ... be ahead of the field ... originate, test and prove the new and the better. It would be more economical, in time, effort and money, to rest content ... let others assume the burden. But, we've the habit of leadership and our

faith in the future of ready-mix concrete — your future — constantly drives us to seek better methods ... better equipment to serve your needs.

Who can measure the value of the many Rex contributions since we built our first truck mixer: the chain drum drive, the 3-point drum mounting, the ball and socket front drum bearing, Manten steel drums, long-life transmissions, bolted-in mixing blades, drop-forged drum rollers, larger size mixers, automatic throttle control, electronic strain gauge testing, the Adjusta-Wate design principle, and the many others? It's beyond computation. And, while



many of these cost-saving, profit-making developments are common to most truck mixers today, others are still exclusive on Rex machines. But, as history repeats itself, you will find that these profit making features, too, will become a standard of the industry. Wouldn't you be wise to work with these "years-ahead" features on your truck mixers not be forced to work against them in your business?

YOU CAN AFFORD THE BEST...

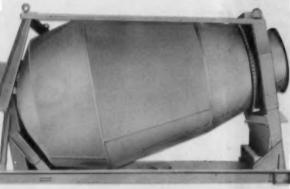
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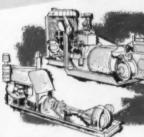
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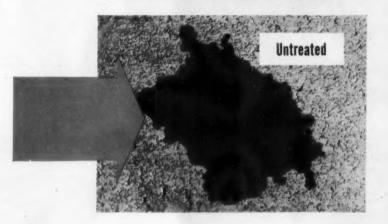
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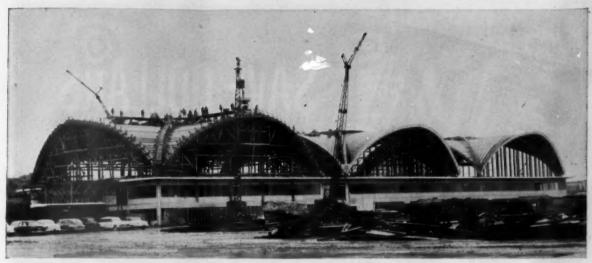
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September, 1956—CONCRETE

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HELLMUTH, YAMANSKI & LEINWEBER, St. Louis, architects; Wm. C. E. Baker, St. Lauis, engineer. Portable false work fabricated by Timber

Structures Inc., Portland, Ore., to design of Roberts & Schaefer Co., Chicago, III. L&R Construction Co., Inc., St. Louis, Mo., contractor.

It was pouring when they roofed St. Louis Airport terminal

THREE SECTIONS of intersecting thin-shell concrete vaults, supported only at their four corners and cast as a unit in one continuous pour, form the unconventional roof of the otherwise conventionally constructed Lambert-St. Louis Municipal Airport Terminal.

Each section covers a 14,400 sq. ft. area. The bays between the arches bring the total roof area to 420' x 120'. The

shells are 32' high at crown and of $4\frac{1}{2}$ " uniform thickness. Their arch ribs are 18" wide and taper from 10' depth at corners to 3' 9" at top.

Each roof section, including ribs, required 400 cu. yds. of concrete. To cast them in one pour called for careful preparation. Two cranes with buckets and a hoisting tower delivering to concrete buggies placed the first section. Adding

two more cranes (one at each corner) cut placement time in half on the other two sections.

An uninterrupted flow of specification concrete was essential to the operation. It was insured by on-schedule deliveries in truck mixers having proper design, capacity, mixing speed and accuracy of water control as certified by Bureau Rating Plate.



BOLTS THROUGH CONCRETE BLOCKS placed between rib forms and deck form tie forms together. Shell and ribs were poured at same time. C&E Staff Photos.



FALSEWORK SYSTEM was designed in 11 separate sections to roll on rails from one pour to next.



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INDUSTRY NEWS

Gordon Tongue on PCA Board

Gordon Tongue, president of Northwestern Portland Cement Company, Seattle, has been elected to the board of directors of the Portland Cement Association. Mr. Tongue has been connected with the cement industry in the pacific northwest since 1913. He fills a vacancy on the Association's board created by the resignation of Chester M. Reitze, formerly president of Superior Portland Cement, Inc.

lic roads will serve under him, continuing his responsibility for the dayby-day operations of the Bureau and its technical activities.

Appointment of the federal highway administrator is expected in the near future. Secretary of Commerce Weeks announced at the Senate Public Works Committee hearing last week that the new top executive of the Federal Highway Agency will be a man who knows how to build roads.

He insisted that historic relationships between Uncle Sam and the states would not be disrupted, even though the new office will be responsible for highway policy determinations.

Congress Approves Highway Administrator Post

In the last hours of the 1956 session, Congress approved the Administration's request for a fereral highway administrator. In the newly created post, a Presidential appointee, reporting directly to the Secretary of Commerce, will direct the conduct of the National Highway Program. The commissioner of pub-

Ready-Mix Pioneer Dies

Ernest M. Hammond, 76, who pioneered the use of ready-mixed concrete in the Buffalo, New York, area, died July 28 while on a fishing trip. He had been president and general manager of the Gravel Products Corporation since 1940.



 Officers and directors of the National Concrete Masonry Association are pictured deep in discussion at their recent midyear meeting in Victoria, British Columbia. Topics reviewed included membership, budget and finance, accident prevention, promotion and technical problems. NCMA President Earl W. Peterson (at head of table) presided over the four-day session.

Calendar ...

SEPTEMBER Building Research Institute — Conference on Modern Masonry — Chamber of Commerce of the United States — Washington, D. C.

OCTOBER
National Ready Mixed
Concrete Association—
Semi Annual Board of
Directors' Meeting—Del
Monte L o d g — Pebble
Beach, California.

OCTOBER
New Jersey State Concrete Products Association—An n w a | Dinner—Swiss Chalet—Rochelle-Park, New Jersey.

OCTOBER
24-25
American Concrete Institute — 9th Annual Regional Meeting — Sheraton-Mount Royal Hotel—
Montreal, Canada.

OCTOBER
22-26

National Safety Council

44th National Safety
Congress and Exposition
—Conrad Hilton, Congress, Morrison, and La
Salle Hotels—Chicago,
Illinois,

29-31 American Concrete Pipe Association—6th Annual Short Course School of Instruction—Chase Hotel —5t. Louis, Missouri.

NOVEMBER
12-19
American Concrete Pressure Pipe Association —
8th Annual Convention and Meeting — Castle Harbour Hotal — Tucker's Town, Bermuda.

1957

JAN. 28FEB. 2

American Road Builders'
Association—55th Annual
Convention—International
Amphitheater — Chicago,
Illinois.

FEBRUARY Concrete Industries Exposition—10th Bienniel Exposition—Kiel Auditorium—St. Louis, Missouri.

FEBRUARY
25-28
National Concrete Masonry Association—37th
Annual Convention—Kiel
Auditorium—5t. Louis,
Missouri.

MARCH
American Concrete Pipe
Association—49th Annual
Convention — Shoreham
Hotel — Washington, D.
C.

Safety Council Opposes Falling Down on Job

Accidental falls — surpassed only by motor vehicle accidents as a killer — are the target of a nationwide campaign launched September 1 by the National Safety Council. The council estimates that more than 450,000 workers in industry are temporarily or permanently disabled annually by falls.

To attain its goal — a 50 per cent reduction in falling accidents — the council plans to organize the campaign in industry with registration, record keeping, and awards. Any company is eligible to participate in the falls campaign. Enrollment may be on the official registration form provided on request from the Council, or by letter.

Available to assist participants in the campaign are a series of 13 posters and 3 banners, films, charts, and sample safety talks. Each concern will be sent a suggested campaign plan for scheduling and using the materials and incorporating them into its safety program. A "Certificate of Achievement" will be awarded to each plant achieving the goal of a 50 per cent reduction in falls or having no chargeable injuries from falls during the campaign year.

Companies enrolling in the campaign must provide information on injury experience from falls covering 1955 and 1956 to the nearest convenient date. A special feature of the campaign will be a "Certificate of Commendation" to supervisors who attain the campaign goal.

Prestressed Concrete Gains Acceptance

The recent steel strike may prove a boon to the pre-stressed concrete business. It is proving itself a capable substitute for the hard-to-get structural steel used in new bridges and buildings.

With the strike threatening to lengthen the 14- to 18-month lag in steel delivery and last month's total heavy engineering contracts showing a 25 per cent dollar increase from a year ago, concrete beams, joists and girders are looking more and more enticing to engineers and contractors. Florida, California, New Jersey, and Pennsylvania all report excellent results in various structures. The trend seems to be taking a good hold on the construction business.

ALTERNATE 4 5 8 TO COURT ANGLED TUG LOK ON CURTE FLAN FLAN STRAIGHT TUG LOK ON CURTE TUG LOK ON CURTE

New Lay-Up Method for Block

● A photo release from the promotion department of the National Concrete Masonry Association describes a radical departure from the usual method of laying up stacked concrete masonry walls. Known as the "Lug-Lok" system, it was developed by Architect John Quincy Adams of Columbus, Ohio. It achieves a pleasing fluted or shadow effect by offsetting alternate block which are interlocked at the protruding ends. The keyed cavities are filled with grout. According to the developer, the Lug-Lok principle eliminates the problem of cracks in vertical joints because all are filled with grout, giving them added thickness and strength. None of the mortar joints are exposed.

ASTM To Hold Pacific Area Meeting

The American Society for Testing Materials will hold its second Pacific area national meeting and apparatus exhibit in the Hotel Statler September 16 through 21. Forty-three technical sessions and more than 200 technical papers are scheduled for presentation.

Of particular interest to the concrete industries are discussions of reinforced concrete masonry beams, the effect of storage on air-entrained cements, and talks on chemical reactions of cement on Wednesday, September 19, and a cement and concrete industry luncheon the next day following further talks on the subject. Everyone concerned with materials is welcome. There is a nominal registration fee of \$5 in effect for the week.

New Institute Engineer



Gordon K.
Owen has joined
the Calcium
Chloride Institute, Washington, D. C., as a
field engineer.
He will make his
headquarters in
Lexington, Kentucky, and provide engineering

service for all calcium chloride users in the Indiana, Ohio, Kentucky and Tennessee area. For the past three years he has served as engineering supervisor and estimator with Thompson-King-Tate, Inc., general contracting and building materials suppliers, Lexington.

Canadian Cement

According to a report from the Bureau of Statistics at Ottawa, the first quarter output of cement in Canada increased 12 per cent over 1955, bringing the total to over 5,800,000 barrels.

March production was also up 12 per cent to a total of 2,077,000 barrels. Shipments to customers in the first quarter of this year were up 32 per cent over 1955.

Canadian Firm Grows Through Autoclaving

A Canadian block firm, run by two brothers, has become a two million dollar business by going in for autoclaving in a big way. Ryan Builders Supply Limited of Windsor, Ontario, is now operating 13 autoclaves and turning out 45,000 block daily, and the company plans to increase its capacity.

"The demand keeps going up, and we intend to keep on expanding," says Leo Ryan, president of the organization. In line with its custom of plowing back a quarter of a million dollars a year into new plants and equipment, Ryan Builders Supply is now building new dock frontage in Windsor to handle increased quantities of raw materials, and next spring will have six more autoclaves in operation at its London, Ontario, plant. This will bring its production to 60,000 block a day.

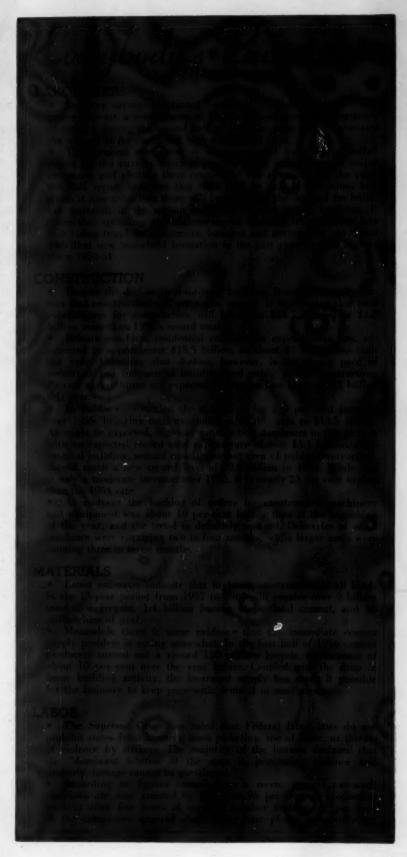
The company also produces precast concrete products and has readymix installations at both plants. It has built two of the largest prestressing beds in Canada.

Firm Installs Third Prestressing Bed

A 450-foot long all-steel double tee prestressed concrete casting bed has been placed in operation at the Dania, Florida, plant of R. H. Wright & Son, Inc. It is the longest continuous such installation in the southeast and one of the few of that length in the nation. The casting bed is the third installed by the firm within two years, the other being at the company's Deerfield Beach plant.

New NCMA Home Plan Book

A 64-page home plan booklet entitled "Concrete Masonry Homes" has been made available to NCMA members. The booklet contains four-color photographs, floor plans, and drawings, as well as information on concrete masonry and its varied uses in and around the home.



NOT IN THE SPECS

Curves Ahead

We haven't quite figured out its full effect upon the concrete products business, but we've just learned that an attractive brunette on the payroll of one of the aircraft manufacturing concerns has the interesting title of vibration and flutter research director. Plants in our industry certainly have some vibration problems, and it isn't hard to imagine that a few attractive brunettes strategically placed might get us into the flutter business fairly soon. Anyhow, it ought to be worth some research.

Death of a (Brick) Salesman

The brick industry is being offered a bonanza that might well prove to be a Mickey Finn. It has been suggested that atomic waste products could be discarded into the ocean or buried in the earth with reasonable safety, by first mixing them with clay, and then baking this material

to form bricks. We can just picture the havoc that this development will touch off in the building field, what with masons having to go over each brick with a Geiger counter before laying it in the wall, and makers of competitive materials blazing away with variations on the "Which Twin Has The Toni?" theme. Just in case the brick lads are silly enough to get stuck in this predicament, we're applying for a patent on a combination trowel and Geiger counter. You never can tell where in hell a simpleminded idea like that might lead.

Up and Atom

Speaking of Geiger counters, we understand that out in some of the uranium sections of the country they're having the devil of a time with eager-beaver prospectors who have been hacking holes in highways wherever their counters indicate the possibility of finding fissionable material beneath the pavements. We've

brooded over this problem a bit and have now hatched out a really fiendish solution.

Pavements of the future will have to incorporate sufficient amounts of fissionable material so that Geiger counters will always click like mad



whenever prospectors get anywhere near a highway. Somebody else will have to worry about how this arrangement will affect motorists. We've done our brooding for this month.

Hazards Are Relative

In our recent article entitled "What Makes A Safe Block Plant" (June 1956, page 34) we came up with one explanation that seems to call for an explanation. One of the safe plant operators we queried, a fellow out at Grand Island, Nebraska, claimed his plant's fine safety record is due to the practice of hiring younger married men.

We've been brooding over this matter a bit, and have come to the conclusion it isn't entirely logical. The way we see it, an older married man, having somehow contrived to survive years of what an illiterate friend of our calls "martial" bliss, ought to be much better able than young Mr. Newlywed to weather the far-less-menacing hazards of working in a block plant. Conversely, the young fellow, still full of moonlight and nonsense, and still struggling manfully to comprehend the vagaries of feminine behavior, probably stands a better than even chance of being run down by a lift truck or walking absentmindedly into a skip hoist pit.

Maybe you can't teach an old dog new tricks, but some weight should be given to the notion that he would never have grown old unless he had picked up a few passable tricks along the way.

Tol' By An Idiot

Our August Sales Clinic has an item extolling the usefulness of the telephone as a sales tool. It appears under the apt heading "For Whom the Bells Toll." A fellow we know who tried the technique on a nation-wide scale says that after receiving his telephone bill he was mainly curious to know "for whom the tolls toll."



• "Well, I don't care! My agent said you were casting today."

Expands Services

Portland Cement Association opens four new district offices to serve cement users in United States

The Portland Cement Association has announced an expansion of its field services to cement users. A regional office is being opened in Los Angeles to supervise activities of the Los Angeles and Seattle district offices, and new district offices are being opened in Baltimore, Trenton, New Jersey, Portland, Maine, and Louisville, Kentucky. Personnel are being added or transferred to several of its other 28 district offices and all four of its other regional offices.

Purpose of the expansion is to make the services of experienced highway, structural and conservation engineers and experts in the use of concrete for farm and home construction available on a more localized basis, particularly in the heavily populated eastern states, according to G. Donald Kennedy, president of the national organization.

This expansion will raise the total number of the Association's regional offices to five and of its district offices to 32, covering almost the entire United States as well as British Columbia in Canada.

Hugh Barnes has been appointed Regional Manager in charge of the new western regional office at 816 W. Fifth St., Los Angeles. Mr. Barnes joined the Association in 1937 and has been Los Angeles district engineer since 1942.

John M. Mc-

Nerney has been

appointed district

engineer in

charge of the Los

Angeles district office to succeed

Mr. Barnes. Mr.

McNerney has



been with the Association since J. M. McNerney 1941, most recently as a statewide paving engineer for the Los Angeles office

Four Association field engineers have been advanced to the position of district engineer to take charge of the three new district offices in the east and the one in Louisville.

Daniel Webster will be district engineer in charge of the Portland. Maine, office, located at 142 High St. This office will serve Maine, Vermont and New Hampshire.





The Trenton office, serving New Jersey, will be under the supervision of Albert L. Blackwell as district engineer. He has been a field engineer for the New York office since

The Baltimore office, from which activities in Maryland and Delaware will be directed, will be located in the Keyser Building, Calvert and Redwood Streets, and in charge of William J. Moore, who has been with the Association's New York office since 1947 as a field engineer.





J. J. Farra

Formation of the three new offices in the east will allow the other district offices in that region to concentrate their activities and give better service in the states they cover. The Philadelphia and New York offices will devote their activities entirely to Pennsylvania and New York respectively. Each formerly served three states. The present Boston office will handle activities in Connecticut, Massachusetts and Rhode Island.

The Louisville district office, to be located in the Commonwealth Building and headed by Jesse J. Farra as district engineer, will direct Association activities in Kentucky. Mr. Farra has been with the Indianapolis office since 1947 as a field engineer. Three other members of the Indianapolis office staff have been transferred with Mr. Farra. They are H. J. Field and W. A. Alcoke, field engineers, and H. V. Curtis, public-relations representative.

The district offices serve as clearing houses for the latest information on construction, design and research advances, and provide technical in-formation and educational services aimed at the best possible utilization of cement and concrete.

Other additions and changes in the Association's field organization are also aimed at providing more localized service in the areas involved, according to Mr. Kennedy. A total of 14 senior highway, structural and soil-cement engineers and construction superintendents formerly working out of the general headquarters in Chicago have been transferred to regional offices in New York, Chicago, Atlanta and Kansas City, Missouri.

Congress Urges Pension Control

The Congressional subcommittee on Welfare and Pension Funds is requesting strict regulation of the pension and welfare funds that cover nearly half the people in the United States. Current fund reserves run into many billions of dollars.

A two-year investigation turned up a number of abuses connected with the programs, although the subcommittee found that the majority of the funds were handled honestly. It recommends legislation covering registration, with a Government agency, of any pension or welfare plan that covers 25 or more workers. This would include not only union funds, but those administered solely by employers.

It also suggests financial reports, to be filed with the government and sent, in summary form, to each worker covered, for plans covering 100 or more workers. Action on the question is expected from Congress next vear.

Cinder Block Makers Meet at Atlantic City

The National Cinder Concrete Products Association held its annual conference in Atlantic City the last two days in July and the first of August. This association, whose members originally produced concrete masonry units that used cinders as aggregate, has retained its name even though its members are gradually turning to synthetic aggregates because of diminishing supplies of cinders.

The tendency toward synthetics is reflected in the nature of the discussions presented during the three day meeting.

Representing a cinder supply company, William Bower told the conference that cinders, while still available, were becoming increasingly scarce as more light and power companies switched to burning pulverized coal. Charles Lower of the Bethayres Company, William Atkins of the Lelite Company, and Martin Gelbman from Expanded Aggregates Corporation told of the success they

had had with special anthracite cinders, anthracite waste from the washing process, and slate quarry refuse.

The gist of the reports is that the block industry is no longer dependent upon any one type or kind of aggregate. Experience is showing that many new aggregates are excellent substitutes for cinders, and in some cases are actually superior.

S. H. Westby of the Portland Cement Association reported on the work his group was doing to assist the block industry. He stressed that advertising campaigns should be initiated in good business periods—not after business has begun to slump. As Mr. Westby sees it, the sales of block could triple if the industry were to promote its product adequately.

Other highlights of the meeting were William J. Shore's discussion of autoclave curing systems and corrosion, and Joseph Wolff's movies on a new type of block he developed.



Prestressed Tee Joists at Work

• The use of 40-foot prostressed concrete tee joists in constructing the roof of a school at Lakeland, Florida, is illustrated in this photograph. Tectum was laid on steel subpurlins and the concrete beams were left exposed inside the building, thus eliminating the extra cost of a hung ceiling. The prestressed tee joists were manufactured and erected by Prestressed Concrete, Inc., of Lakeland. The building is a workshop for retarded children. It is 40 feet wide by 80 feet long without supporting columns. The contractor, Lakeland Builders, Inc., reports a saving of 50 cents per square foot over a conventional type of roof.

CEMENT BRIEFS

New Plants

Alpha Portland Cement Company plans to build a \$3 million plant in the Limekiln — Buckeystown — Adamstown, Maryland, area. Completion is set for 1958.

Calaveras Cement Company has announced the opening of a bulk cement transfer plant in San Leandro, California. The \$100,000 installation has a storage capacity of 5,000 barrels of cement.

Northwestern States Portland Cement Company has let a contract for a new ½ million dollar packhouse. This will be the final step in its post war expansion program and will enable the company to produce 3 million barrels of cement annually.

Increased Capacity

California Portland Cement Company, which opened a \$12,000,000 processing plant at Mojave, California, last year, has applied for building permits for additional structures totaling \$1,853,936.

Consolidated Cement Corporation has announced that its directors have authorized an additional 1.25 million barrels of cement producing capacity for the company's Paulding, Ohio, plant now nearing completion.

Monarch Cement Company has announced plans for a \$6,500,000 expansion program. Scheduled for completion in 1957, it will increase the plant's capacity to 2.5 million barrels of cement annually.

Volunteer Portland Cement Company will start immediate construction on an addition which will increase its present capacity by 40 per cent. When completed, plant capacity will be 3 million barrels a year.

May Production

Production of finished portland cement in May 1956, as reported to the Bureau of Mines, U. S. Department of the Interior, totaled 29,606,000 barrels an increase of 10 percent over the the 27,031,000 barrels produced in May 1955. Mill shipments in May 1956 totaled 31,787,000 barrels, an increase of 9 per cent over the 29,172,000 barrels shipped in May 1955. Stocks of 26,198,000 barrels of finished portland cement on hand May 31, 1956 were 11 per cent more than the 23,672,000 barrels on hand May 31, 1955. Clinker production during May 1956 totaled 27,853,000 barrels.

SPLIT UNITS FOR BASEMENT WALLS

they offer the builder impressive advantages in both appearance and cost savings

Split units, which have accomplished a good deal in recent years to win acceptance for concrete block in above-grade exposed work, now show promise of doing an equally good job of helping block producers to win back some of the basement market. Borin Builders Supply, Inc., Detroit, Michigan, are meeting competition in the basement market by manufacturing split-face 12-inch units in a full-range of colors to enable builders to offer their customers attractive, finished basement walls at virtually no extra cost.

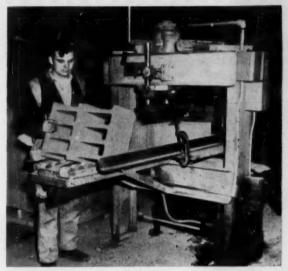
How is it done? On the face of it, at least, the procedure is about as simple as anything that goes on in a block plant. The broken-faced 12's are produced as siamese twins in a standard 12-inch mold box by removing the division plate and using a special stripper shoe. After the siamese units have been cured they are broken apart in a conventional block splitter.

The resulting unit is, of course, slightly oversize in the wall thickness dimension, due to the elimination of the division plate. This appears to cause no difficulty for the mason, since the variation is actually somewhat less than that introduced by the splitting of any machine-made unit.

The result, in any case, is an attractive, finished basement wall with the color integrally cast into the material. As the Borin concern is pointing out to its customers, it costs between \$1500 and \$2000 to finish an average size basement with knotty pine. It takes a good deal of time and trouble, and you wind up with surfaces that are difficult to maintain and not too well adapted to the overall conditions generally encountered in basements.

For a very small increase in the cost of the foundation material itself, the split 12's make it possible to create outstandingly decorative finished walls that have considerable appeal to home buyers. Borin sells the split 12-inch foundation unit for about 3 cents more than a standard 12-inch unit.

According to Ralph Borin, one of the heads of the concern, the breaking of the double 12-inch units has not so far caused any noticeable production slow down. Due to the extra weight of the unit, however, it is necessary to feed the block into the splitter with a two-man crew. This minor difficulty will be solved shortly by the installation of an off-bearing hoist which will be used to feed the splitter. The units are formed immediately into cubes when they are taken away from the splitter, and subsequent handling is by means of a fork lift truck. The larger units do not cause any increase in culls as long as the block are permitted to cure and dry out before they are split. Borin operates two high-production block plants in the Detroit area.



 ABOVE: A double 12-inch unit, produced by removing the division plate from a standard mold box, is about to be split on a hydraulic machine. BELOW: This basement wall of split units provides a pleasing, finished appearance at a premium too small to identify in the total cost of a home.



How To Save Cement By Proper Grading Of Aggregate

By WILLIAM GRANT

In an article on grading and proportioning of aggregate which appeared in the February 1956 issue of Concrete, the effect of sand on the strength of block concrete was briefly discussed. Since sand is an important constituent of any block mix, and there exists considerable misconception regarding its use, further discussion of the subject seems warranted.

SAND ACCRECATE — Deposits of sand aggregate are found in most parts of the country. However, this material in its natural state does not as a rule lend itself to use as a concrete aggregate without washing and regrading.

Aggregate containing soft fragments, thin and friable particles, various porous cherts, clayey sandstone or clayey limestone, is not suitable for concrete. Natural aggregates are derived from rocks by disintegration or weathering through frost action, water or other agencies. They take the qualities of the rock from which they are derived. Siliceous quartz sands are best for concrete, but crushed sands from any durable rock will be satisfactory if natural sand is not procurable.

Particle Shape — A sand composed of smooth, rounded grains or particles may give better results with coarser grading than a sand made up of sharp angular particles with rough surfaces.

In discussing grading a coarse particle is considered to be one passing a ½-inch or %-inch sieve and retained on a No. 8 sieve, that is a sieve having eight openings per linear inch. A fine particle is a particle passing a No. 8 sieve or a smaller opening.

Sharp, angular or flat elongated particles require more fine material to produce workable concrete mixes than is required where aggregate particles are more rounded. When the aggregates are made up largely of such particle shapes, more cement may be required, besides producing a detrimental effect on the workability of the concrete. Good concrete can be made from crushed stone or other crushed materials but the particles should be more or less cubical in shape.

Deleterious Materials — Sand should be free from deleterious material such as clay, loam, silt or organic matter.

In order that the cement paste, made of cement and water, may adhere to the grains of sand and particles of coarse aggregate, each grain or particle of material should be free from any coating which prevents the formation of a proper bond between the cement paste and the aggregate. Fine aggregate in its natural state is more likely to contain an excess of impurities than coarse ag-

gregate. Clay and loam are the most frequent impurities in both fine and coarse aggregate.

A rough method for determining the presence of loam is to rub a small amount of the fine aggregate in the palm of the hand and note whether it causes a dark stain or spot. Such a stain indicates the presence of loam.



A quick-method of test for clay and loam (as illustrated) is to take a quart jar and add to a depth of 2 inches a representative sample of the sand to be tested. Add water until the jar is 34 full. Screw on the cap and shake vigorously for one minute, the last few shakes to be made in such a manner as to level off the sand. Allow the jar and contents to stand for one hour, by which time the clay and loam content will be deposited in a

layer on top of the sand. The line of demarcation between the impurities and the sand is clearly indicated by the difference in color and fineness. A layer more than ½ inch in thickness indicates that the sand is unsatisfactory for use unless it is subjected to washing.

Another method for determination of clay and loam is by decantation. This method requires the use of a reasonably delicate scale and weights, and sample containers. It is more time consuming than the method given above.



The maximum content of this impurity should be limited to three percent. Organic matter is readily determined by a colorometric test. A very small amount in the sand may greatly reduce the strength and soundness of the concrete unit. It is therefore important to determine the presence of organic matter in the aggregate. Loam or silt (earthy matter) is liable to contain organic matter, and fine aggregate with a higher content than 3 per cent should not be used without first testing for

organic matter. In making the test, a 12-ounce glass prescription bottle is filled to the 4 ½-ounce mark with

the sand to be tested. A 3 per cent solution of sodium hydroxide is added until the volume of the sand and solution, after gentle agitation, reaches the 7-ounce mark. A rubber stopper is inserted in the bottle and the contents shaken, then allowed to stand for 24 hours.

The depth of color of the solution indicates the extent to which organic matter is present. A range of color from clear or colorless to a dark amber may result. Any solution darker than a straw color should be considered as a warning that the sand is unsatisfactory and should not be used until the organic matter is reduced.

Sodium hydroxide solution is made by dissolving one ounce of caustic soda in a quart of distilled or boiled water. The solution is kept in a bottle with a tight rubber stopper and should not be used if more than three months old. Caution must be used in handling this solution on account of its corrosive qualities.

Grading Limits — The allowable grading limits for sand depends to some extent on the shape and surface characteristics of the particles. Sand that is so graded that it contains many sizes is more economical than sand in which one or two sizes predominate.

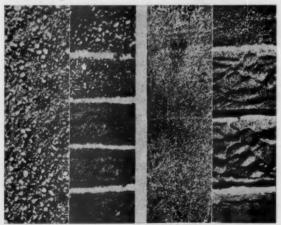
A properly proportioned combination of well graded fine and coarse sands and coarse aggregate should contain all sizes between the smallest and largest without an excessive amount of any one size.

Aggregates in which the relative amount of particles of different sizes are such that the particles of one size are sufficient to fill the voids of the next larger size will have a minimum of void spaces. Such a mix will therefore require a minimum proportion of cement to secure a product of required strength. It is also desirable to use the smallest proportion of fine aggregate which will properly fill the void spaces in the coarse aggregate.

Sand having a smooth grading curve of regular shape cannot always be obtained commercially. Neither is it always most desirable. If the results of the sieve analysis fall within certain limits and the fineness modulus is

• Sample No. I shows a well graded sand before and after separating into various sizes. Particles vary from fine to those just passing the No. 4 sieve. Width of strip indicates amount of each size, For good workability at least 15 per cent should pass a No. 48 sieve. Five per cent through the No. 100 sieve is needed to increase the density of the concrete. Sample No. 2 shows a poorly graded sand lacking particles larger than 1/16-inch (No. 10 sieve) in size, and how it looks when screened.

Sample No. 1 Sample No. 2



properly restricted the sand will almost invariably be satisfactory with respect to grading. A range of fineness moduli from 2.50 to 2.90 is recommended.

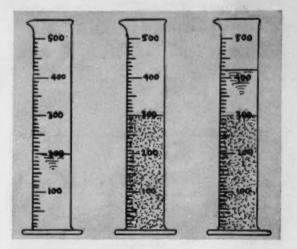
The accompanying illustration shows 2 samples of sand in their original condition and separated into their various sieve sizes.

Voids in Acgregates — The largest percentage of voids is found in aggregate in which the particles are of the same size. Conversely the smallest percentage of voids is found in aggregate in which the particles are of such different sizes that the voids of each size are filled with the largest particles which will enter them. Therefore a properly graded mix of coarse and fine aggregate has a smaller percentage of voids than sand alone.

The percentage of voids in dry sand ranges from approximately 28 per cent for coarse, well-graded natural sand to 45 per cent for a uniform-grained natural or screened sand.

DETERMINATION OF VOIDS — The percentage of voids in an aggregate may be determined as follows:

Fill a 500 cc (cubic centimeter) cylindrical graduate as shown in illustration to the 200 cc mark with water and another 500 cc cylinder to the 300 cc mark with



aggregate to be tested. Pour the 300 cc of aggregate slowly into the water. The combination of the 200 cc of water and the 300 cc of aggregate will give a mixture which is less than 500 cc in volume. This volume subtracted from 500 cc is equivalent to the number of cc of voids in the original 300 cc of aggregate. The percentage of voids in the original aggregate is determined from the following formula.

500 cc - cc volume of mixture/300 cc \times 100 = percent of Voids

DETERMINATION OF MAXIMUM DENSITY — Maximum density is obtained when the grading is such that there is the least percentage of voids. At maximum density the combination of particles will give the greatest weight for a given volume.

Suppose 1 cubic foot of coarse dry rodded aggregate (No. 4 to %-inch sieves) weighs 92.0 pounds. A certain percentage of this volume is air due to the voids created by contact of the particles. The addition of a finer aggregate (No. 28 to No. 4 in sieves) can be rodded into the 1 cubic foot volume to fill the voids of the larger particles. The 1 cubic foot volume is still retained, but the weight is now increased to 100 pounds. The finer aggre-

gate creates many more voids than the coarse material contained, but they are much smaller. The addition of a finer material (Minus No. 100 to No. 28 sieves) rodded into the same volume will increase the unit weight still further, say to 105 pounds. This procedure constitutes a complete test, using certain percentages of the three sizes of aggregate.

Tests should be repeated exhaustively using various percentages until a maximum weight is obtained.

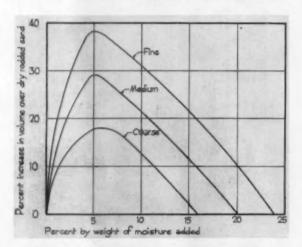
No. 1 Percentage by weight coarse material	0	10	20	30	40	50	60	70
Percentage by weight medium material	100	90	80	70	60	50	40	30
No. 2 Percentage by weight mixture "A" giving greatest weight	0	10	20	30	40	50	60	70
Percentage by weight fine material unit weight of Mixture "B"	100	90	80	70	60	50	40	30

Plot the results of No. 2 with percent of Mixture "A" as abscissia (horizontal line) and unit weight of Mixture "B" as ordinate (perpendicular line) and draw a representative curve through the plotted points.

The percentage of Mixture "A" giving the greatest weight will be readily apparent, and the shape of the curve will indicate whether the percentage is critical.

EFFECT OF MOISTURE ON SAND — Moisture exerts a considerable effect on the percent of voids in sand. When water surrounds a grain of sand it occupies space and separates this grain from the grains adjacent to it.

Since a fine sand has a larger number of grains for a specific volume it is more affected than a coarse sand.



If water is added to dry sand and the resultant mass is moved the mixture will be found to increase considerably in volume and weigh less per cubic foot. A maximum volume will be obtained with the addition of from approximately 5 to 7.50 per cent of water by weight. Larger percentages of water will give a decrease in volume until at the point where the sand is thoroughly inundated it will have a volume slightly less than the original volume.

Bulking of sand is particularly important when volumetric measurement of aggregate is used. Unless this factor is given strict attention unsatisfactory results will be produced. Besides, more cement than needed will be used in the mix.

Bulking values vary depending upon the grading of the sand, the percentage of free moisture and the method of determination. Greater bulking occurs with fine sand than with coarse sand. Consequently, large changes in the voids in the sand occur with bulking.

These conditions are shown in the accompanying graph.

Likewise, the following table shows that volume change takes place due to variation in water content in sands. Because of this volume change, corrections must be made in the proportionate amounts of pea gravel, coarse sand and fine sand in a concrete mix to be sure that the solid volume of each aggregate is the same for each batch.

A study of the table shows that the actual solid amount of sand in a cubic foot containing 5 to 7.5 per cent of moisture is only about 80 per cent of the actual amount of sand containing 1 per cent moisture.

A moist sand containing 5 per cent of moisture will occupy about 25 to 30 per cent more volume than the same sand when air dry. When dry the grains of sand move easily and pack closely together, whereas, when the sand is damp, because of the surface tension of the films or droplets of water between the grains, the grains of sand adhere and tend to bridge or arch, which increases the porosity and consequently the bulk of the sand. Incidentally, it follows that damp sand, as received from a hopper will be considerably lighter per unit volume than the same sand when dry.

When damp sand with a 25 per cent bulking factor is used, a compensation must be made by increasing the volume of the sand compartment 25 per cent. This volume of damp material if dried would be equivalent to the volume of dry sand as established in the designed mix. Similarly, when proportioning is done by weight the moisture content of the material must be considered and be compensated for.

Since the percentage of moisture in the sand fluctuates from day to day and sometimes from load to load, it is difficult, without actual test, to determine the amount of dry sand in a specific quantity of wet sand.

RANGE OF MOISTURE CONTENT IN SAND — Sand may be in four states as shown in the accompanying sketch. Oven dry means no moisture on the surface or in the interior of the particles. Air dry means dry at the surface but containing some interior moisture, although less than the amount required to saturate the particles. Saturated and surface dry means dry at the surface but

TABLE-EFFECT OF MOISTURE ON SANDS-MEDIUM SAND 0 TO NO. 8-F. M. 2.30

	Dry Rodded	Dry Loose	Loose	Loose	Loose	Loose	Loose	Loose	Inundated
% Water by Weight	0	0	1	2.5	5	7.5	10	15	20
% Bulking	0	5.8	15.2	34.5	43.3	41.0	38.6	24.6	2.3
% Loss Per Cu. Ft.	0	5.5	13.2	25.6	30.2	29.0	27.7	19.7	2.2
Wt. Per Cu. Ft. including water (lb.)	108.0	102.0	94.5	82.4	79.3	92.4	85.8	99.5	127.0
Wt. Dry Sand in 1 cu. ft. (lb.)	108.0	102.0	93.6	80.4	75.5	76.6	78.0	86.6	106.0

wet in the inside. Damp or wet means wet on the surface as well as wet inside.



DETERMINATION OF MOISTURE — Various methods have been suggested for determining the percentage of surface moisture in sands. The most direct method is to actually dry out a weighed sample of the moist sand. Such a sample may consist of one or two pounds of the material accurately weighed in a shallow pan of known weight. The sample is then subjected to heat until the surface moisture is driven off. This can be determined by testing to see when the sand will run as in an hour glass. Drying may be done in a hot oven or on an electric plate. Allow contents of pan to cool, then weigh. The difference in weight is the total amount of moisture contained in the sample. The calculation is simple.

A = weight of damp sample

B = weight of dried sample

Percent of moisture = 100 x A-B/B

The dry weights are easily converted to damp weight by the use of the percentage correction factor.

Proportioning Acgregate by Volume — This system, while not considered as up-to-date as proportioning by weight, is still extensively used. It is capable of yielding good results, provided certain fundamental principles are given attention.

The following data from plant practice is presented to illustrate certain factors and show the measures taken to correct variations in the aggregate. The sketch shows the various batcher dimensions before and after corrections were made for moisture content in the sand and is selected with a view to clarifying the fundamentals. It will be noted that a reserve section is shown at the extreme left. The dividing plates should be arranged so as to allow their being moved toward either end of the

	SAND	GRAVEL		SAND	GRAVEL
	40%	00%		45.5%	545%
20	MISSELF .	6.63 C.F	30 5	13.20 C.F	15.03 C.F

batcher. This permits changes being made in the volume of the compartments to accommodate any desired combination of the aggregate.

Assuming a total batcher length of 48 inches and a proposed mix (based on dry materials) of 60 per cent coarse aggregate and 40 per cent sand, a simple arrangement would be to calculate that 40 inches of the 48 inches would be used for the 60/40 (dry) mix.

On this basis 60 per cent of 40 inches, or 24 inches, would be used for the coarse aggregate and 40 per cent, or 16 inches, would be used for the sand mix. This

would leave 8 inches as a reserve space to be used to accommodate the bulking that takes place when ordinary damp sand is used.

The coarse aggregate compartment occupying a length of 24 inches, or one-half the length of the entire batcher, will have one half the total capacity of the batcher or 31.66 divided by 2 equals 15.83 cubic feet.

Similarly, the mixed sand compartment, having a length of 16 inches, or one third the length of the entire batcher, will have a capacity of one third the total capacity of the batcher or 31.66 divided by 3 equals 10.56 cubic feet. The reserve space, 8 inches long, will have a capacity of 31.66 divided by 6, or 5.28 cubic feet.

The effect of moisture and bulking having been taken into account, the problem then is to apply these principles to this case. In plant practice, the sand is more or less wet at all times, and the bulking factor will vary. For example, assume the damp sand has a bulking factor of 25 per cent. Since the coarse aggregate does not bulk to any appreciable extent due to surface moisture, consider it as dry material. This leaves only the bulking of the sand to be considered.

Since the bulking factor is taken as 25 per cent, or one fourth more in volume for damp sand, it follows that one fourth more volume of bulked sand must be added to give the equivalent volume of dry sand. Therefore, one fourth of 10.56 cubic feet or 2.64 cubic feet is the extra volume of sand measured in a damp bulked condition necessary to produce the equivalent volume of dry sand.

As the length of the mixed sand compartment was originally 16 inches, the length must be increased 25 per cent of 16 inches, or 4 inches, thus increasing the length to 20 inches. This increase in total length changes the volume of the compartment from 10.56 cubic feet to 13.20 cubic feet, and the length of the reserve compartment is consequently reduced by 4 inches.

In most plants the batcher is operated at its full holding capacity, and therefore does not allow for any reserve space. Under these circumstances an alternate course may be taken to accommodate the extra volume of damp sand required. This consists of welding the necessary height of container onto the sand compartment. Increasing the height of the sand compartment 9 inches will accommodate the 2.64 cubic feet of sand required for adjustment.

The mix, which was originally based on a 60 per cent coarse aggregate to 40 per cent dry sand, has been changed in its proportions. It now becomes a 54.5 per cent coarse aggregate to 45.5 per cent (damp) sand combination. The relationship between this combination and the original mix is exactly the same so far as the volume content of dry material is concerned. The volume of cement used is still 2 sacks (188 pounds).

Under this adjusted scheme of proportioning of the aggregates, the original designed mix is maintained. Hence, less cement is used in proportion to the actual amount of damp aggregate than in the case where the bulking factor is not considered.

If the bulking of the sand is not taken into consideration, there would be an excess of coarse aggregate in the mix, which would produce too coarse a texture. The extra amount of cement in relation to the combined aggregate would give greater strength, but strength which is not needed.

With the addition of 2.64 cubic feet of damp sand, the texture of the units would be smoothed out to the approximate texture obtained in the original designed mix of dry materials. The strength would be reduced slightly,

but still remain high enough to meet requirements.

The greatest advantage to be gained by the adjustment in the proportioning would be the production of more uniform units, and approximately four additional 8 inch units per batcherful of aggregate. It would seem then that this increased production, at so little extra cost, would be most desirable. These advantages, however, are predicated on the fact that well graded aggregates are being processed, and that there is proper curing of the units.

If a producer is satisfied with the blend of aggregate he is using, but wants greater yield of block from the volume of cement used, he may maintain his coarse aggregate and combined sand in the same proportions, but increase the total amount of aggregate to the volume of cement used by adjusting the capacity of both compartments. Where a blend of mixed aggregate is used, the volume of aggregate should be increased gradually by making trial mixes and testing the units so produced until the minimum strength requirement decided upon is obtained.

Proportioning Accrecate by Weight — In plants where proportioning is done by weighing the separate materials, the operational problems are greatly minimized. In order to obtain conservation of cement and maximum production it is essential that moisture tests be run on the separate aggregates. Likewise, the success of operations is predicated upon the use of well-graded and well-proportioned materials.

Since wet sand contains more water than wet coarse aggregate, when fixed weights of cement and wet sand and coarse aggregate are being used a change from dry sand to wet sand will result in a lower percentage of sand grains in the concrete mix. The change in the coarse aggregate will not be affected to any appreciable extent. This change may be brought about suddenly by a heavy rain, in which case an under-sanded harsh mix containing too much coarse aggregate could result.

If the sand is wet the weighed batch will be short by the weight of the water included. Since the weight of the cement does not change, the batch will be richer; that is, the weight of the cement per batch will be greater than required.

A regular plant mix based on the use of dry materials consisting of 1,750 pounds of coarse aggregate to 1,250 pounds of mixed sands, and 300 pounds of cement, shows a ratio of one part cement to ten parts mixed aggregate.

The term "dry material" refers to aggregate in a moisture-free or oven-dried condition. It is not expected, of course, that aggregates in this ideal condition would actually occur in the batch, but it serves as a basis for material corrections for varying moisture contents.

For example, it is assumed that the coarse aggregate has 2 per cent surface moisture while the mixed sand has 6 per cent surface moisture. It is evident that if the weights of the original charge were used there would be a shortage of aggregate for the same amount of cement. Corrections are shown in the following table:

	Origine Dry Wei Pound	Moisture Factor		Corrected Weight for Damp Materials		
Coarse Aggregate Mixed Sands	1,750 1,250	×	1.02 1.06	=	1.785 1.325	
Total Weight Cement	3.000				3,110	

In figuring the amount of water necessary for a batch the surface water in the aggregate should be taken into consideration. This amount of surface water figured in gallons should be subtracted from the total number of gallons that would be used if surface dry aggregates were used.

From these batch figures it will be seen that if no consideration is given to the moisture in the aggregate, the charge of the dry aggregate weighed in a damp condition is actually 110 pounds short on account of the surface moisture of the aggregate. This shortage is equivalent to a loss in yield of three block per 300 pounds of cement, or practically one block per sack of cement.

Workability of Mix — Workability may be defined as the ease with which a given variety of materials in certain proportions can be mixed into concrete and subsequently handled. Its control depends upon the personal judgment of the mixer operator, since there is no generally recognized form of test for the determination of this characteristic. The principal factors affecting workability in block mixes are: (1) The cement factor; (2) characteristics of the cement (portland cements vary in their water requirements and hence in their influence on workability); (3) surface and shape of the aggregate particles; (4) gradation of the aggregates; (5) consistency of the mix.

Making 12-inch Block — An item of block production which does not receive sufficient attention is the manufacture of 12-inch units. Most operators decide on a definite mix and operate on this basis, regardless of the size of the unit being manufactured. The fact that 12-inch units enclose approximately 52 per cent more area, with the bearing area increased by approximately 25 to 30 per cent, introduces factors not met with in the production of 8-inch block.

In testing the compressive strength of a block the calculation is generally made on the gross area instead of the net area. Hence the unit strength of a 12-inch block is considerably less than that of an 8-inch block. The higher attendant handling loss, and the fact that 12-inch units are subject to greater loads in actual field construction, would indicate the following course:

The producer should determine what strength of 12-inch unit is most economical for his production requirements, keeping in mind code specifications. If any cement saving is to be made it should be done by adjusting the 8-inch block mix rather than at the expense of the 12-inch block mix. However, test samples should be taken from production runs to confirm these factors.

Conclusions — One of the major problems of the block industry is the design and control of the concrete block mix. Many manufacturers would realize a greater yield of block per sack of cement by proper selection and proportioning of the various sized aggregates.

The fact that a particular grading will produce a salable product in one locality is no guarantee that it will do so in another locality. Variations in the manufacturing processes and the curing technique will affect the density, absorptive and textural qualities and ultimate strength of the units. The operator must generally utilize the aggregates at hand, rather than contend with the added expense of importing from a distance a specially graded material. Under these conditions the manufacturer can seldom reach the ideal gradation. He can, however, obtain the best results from the particular materials he must use by following the fundamental principles discussed here.



 This automatic truck washing system turns dirty vehicles into clean ones in just 45 seconds.

Warner Washer Works Wonders

The Warner Company has set up an automatic ready-mix truck washer that reduces cleaning time from an hour and a half to 15 minutes

By T. WAYNE DUTTON

The Warner Company

Warner Company, in operating a fleet of 241 trucks, realizes the importance of clean trucks as a source of advertising. This, coupled with the desirability of clean trucks for maintenance, prompted the company to start a program to develop an economical method for automatic washing of trucks, to take the place of nightly hand washing.

Although detergents, solvents, and various pressures and temperatures were tried, it was found that clear water, at 150 psi nozzle pressure and ambient temperature, would adequately remove normal road dirt and grime encountered with concrete deliveries.

Total aperture cross section and

pump capacities deliver approximately 450 gallons of water per minute to the surface of the truck. Actually, the truck trips a pneumatic switch which starts a timer for a controlled cycle of about 45 seconds. The truck coasts down a ramp under the yoke that carries the nozzles, with the barrel rotating at a fairly high speed to attain maximum coverage. The ignition systems of the trucks are periodically sprayed with a moisture resistant compound to minimize stalling. Transmission vents were modified to reduce lubricant contamination, and cab bodies have been inspected and repaired to make them as watertight as possible.

The same pumping equipment that

supplies the yoke is used for barrel washout. Here a self-propelled rotating nozzle is used which is lowered into the batch opening of the bellyloading trucks. The manually run push button is located at the rotating joint of the boom arrangement, which makes it difficult for the operator to turn on the water until the nozzle is at the bottom of the barrel. Once started, the boom is lifted slowly so as to scrub the entire area of the internally fluted barrel. This action is also timed so that a 200-gallon batch of water will clean the 220cubic-foot area adequately.

After closing the hatch, the operator sets the gears to rotate the barrel in the discharge direction while the truck is under the yoke. Rotating in the discharge direction allows the water in the barrel to clean the reargate, which is not accessible from the nozzle spray pattern.

The entire system is supplied by the one pump, and controlled by a series of timers, relays, and solenoid valves which all tend to reduce the supervision needed to do satisfactory cleaning.

Before we instituted drive-through cleaning, Warner's drivers normally required 45 minutes to an hour and a half to clean a truck, and used 800 to 1200 gallons of water. Now, with 500 gallons of water, they can do the job in 15 minutes.



A Progressive Pioneer Expands

ODAY, Cinder Block, Inc., can produce a high quality block ready to go into a wall within 24 hours of the moment materials are taken from the aggregate stockpoles. This is a far cry from the results of the production techniques used when the business was started 33 years ago in Detroit - and so is the block that's being turned out. Much lighter now both in weight and color, and made with smaller amounts of cinders, today's product

The company, first in Detroit to manufacture cinder block, has recently completed the half-million dollar expansion program that has made it a showplace, and has

is stronger, more uniform, and better looking.

in the fire plans for even further modernization. In April it previewed its new high-pressure steam curing plant. Six 86-foot long autoclaves have been installed, preheat kilns were rebuilt, and the newest automatic quality con-

trol equipment has been purchased.

The new boiler building, across the railroad tracks that run through company property from the block plant, is built of 8-inch concrete block, painted with cement enamel on the inside and kept spotless. The new main office is also done in block in various patterns excellent for display - and painted in quiet pastel

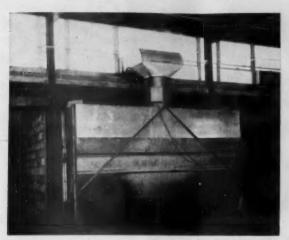
Right now the company is turning out about 6 million lightweight units a year, keeping pace with the industry. Not content to rest on the laurels of a successful past, it has prepared itself for an even better future.



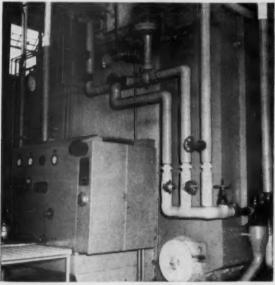


 Above is the new feed-water preheater, part of the high-pressure curing system Cinder Block, Inc. has installed. It furnishes water to the boiler at 220 degrees. To the right, one of the lift trucks loads an autoclave with a 108-block rack. It takes 25 of these racks to fill the autoclave.

September, 1956-CONCRETE



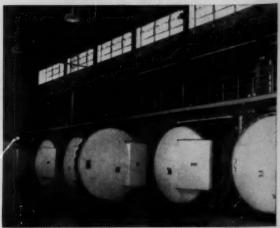
 This portable exhaust hood, moved along on dollies, is used for quick removal of steam from the low pressure curing rooms.



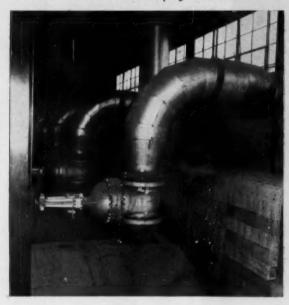
• The water tube boiler heats the water sent into it by the preheater into steam. It has a capacity of 30,000 pounds per hour.



CONCRETE-September, 1956



◆ ABOVE: This view of the six 86-foot long autoclaves shows their quick-opening hydraulic doors. The autoclaves are arranged across from the loading ends of Cinder Block, Inc.'s six rebuilt preheat kilns for ease in transferring block. BELOW: This is the exhaust piping on the back of the autoclaves, used to reduce pressure quickly. Blowdown time is usually only thirty minutes. Two silencers cut down the noise of the escaping steam.



● The main plant building had to be large in order to hold the preheat kilns and the autoclaves both. The bright glass and block structure is kept scrupulously clean at all times, not only out of pride in the company and its new facilities, but as a safety measure.

You can avoid the expenses of litigation and a great deal of plain irritation if you will . . .

PUT THAT SALES CONTRACT IN WRITING

WILLIAM H. ALLEN

OT long ago the writer was retained by a ready-mixed-concrete company to collect an overdue account owed by a man whom we will call Mr. Hughes. It seems that Mr. Hughes had dropped by the company's office one day and had asked that a load of concrete (3 cubic yards) be sent out to his family burying plot in a rural cemetery at 4:00 o'clock that afternoon. In the course of the conversation the manager of the plant asked if it would not be better to send the concrete at 3:00 o'clock so that if a second load was needed there would be time to deliver it before 5:00 o'clock. Mr. Hughes agreed that it would. The manager said that the delivery might be as much as 10 or 15 minutes late but no more than that. As a result Mr. Hughes was at the cemetery at 3:00 that afternoon and waited until five minutes after four, at which time he left. At ten minutes after four the truck with the concrete arrived at the cemetery and waited until after 5:00 for the customer to appear. The driver then returned to the plant. Since the concrete was beginning to harden, he discharged the load at the city dump.

Mr. Hughes was sent a bill for the concrete and refused to pay it.

In this case, with only one load of concrete involved, the supplier decided not to sue. But if there had been more at stake it would have been a different story. This misunderstanding, and the hard feeling that went with it, could have been avoided if the ready-mix firm had made a practice of requiring its customers to sign a simple contract specifying the time and place of delivery as well as the amount of concrete to be delivered. Such a contract need not be at all complicated, since it can be made a part of the sales ticket or order form.

The best argument for requiring written contracts is that they help to prevent precisely such misunderstandings as the one described above. If any question arises as to the agreement of the parties, reference to the written document will usually suffice to clear up the matter. Whenever a question arises under an oral agreement, there is nothing to refer to and misunderstanding, hard feelings, wasted time and money, and even litigation may follow. Even though the terms of an oral agreement may be remembered in a general way, they are likely to be indefinite to the extent that a misunderstanding may occur.

On the other hand, a written contract is generally accepted as conclusive evidence of the agreement reached by the parties. All of the terms and conditions are down in black and white, where they may be referred to by all concerned.

A written contract may not only avoid misunderstanding, but may also save the trouble and expense of litigation. Law suits are expensive, and it frequently occurs that even the winner has lost so much in time and expense that he is worse off than he would have been if he had never been involved. Although a written contract is not a guarantee against litigation, it tends to hold disagreements to the minimum.

If, in spite of everything, it is necessary to resort to the courts, a written contract gives the court and jury some definite evidence of the agreement between the parties. There can be very little dispute regarding the terms of a written contract, in court or out, but it is sometimes almost impossible to prove the terms of an oral contract.

Another reason for making written contracts a part of your business policy arises in many states under what are known as "Dead Man's Statutes." Although such statutes may vary considerably from state to state, they all do essentially the same thing. They prohibit the giving of oral testimony against the interests of a dead person. Now suppose that you have entered into an oral agreement with a contractor to furnish the concrete for a job he is doing. When the work is about half completed, the contractor is killed in an automobile accident. In the event of a dispute, how are you going to prove the terms of the contract, and establish that you have kept your part of the bargain? Without a

written contract of some nature it would be most difficult to do.

It is not necessary that a written contract be a complicated instrument. It may, in fact, be a quite simple agreement drawn up between the parties themselves. It is simply a matter of reducing to writing what each of the parties agrees to do. It is not necessary that this agreement be written in any particular form or on any special kind of paper. It may be written in longhand, typed or printed or a combination of the three. There are no particular words or phrases that must be used to the exclusion of all others. In essence the contract will say that you agree to deliver and pour the concrete (usually a certain amount) at a specified place and at a specified time. Any other terms and conditions that the parties agree upon may be set down in the contract. It is important to remember that in any contract, written or oral. you are bound by the agreement.

Be sure that the written contract contains all of the terms and conditions agreed upon by the parties. The law does not permit a written contract to be changed by oral agreement. If such a change is made, it cannot take priority over the written agreement. You cannot say; "I know that the contract calls for delivery at 3:00 o'clock, but we agreed orally that 4:30 would be satisfactory." The court will not even allow evidence of such an oral agreement to be introduced. If some clause in the contract is not clear, it may be explained by the use of oral testimony.

The writer's suggestion is that you draw up, or have your attorney draw

up, a contract form that meets your needs and that contains all of the terms and conditions that you will want in the majority of your contracts. The form can leave blank spaces to be filled in with the details of each particular contract.

One of the most practical contract forms consists of a sales ticket or work authorization form that has a few lines of fine print at the bottom just above the line for the customer's signature.

The sales ticket itself will contain such information as the name and address of the customer, where the concrete is to be delivered and at what time, the quantity of concrete to be delivered, if this can be easily estimated, and the price of the concrete.

There will follow a statement at the bottom of the ticket that will read something like this:

"I hereby authorize the above concrete or other materials to be delivered to the above address, and agree to pay cash on delivery or to pay on terms satisfactory to you. I waive as to the payment of the total amount due all rights of exemption under the constitution and laws of the state of (whatever it is) as to personal property, and agree to pay all costs of collecting the amount due or to be due including a reasonable attorney's fee."

Signature of Customer

This simple statement at the bottom of your sales ticket converts it into a contract in which the customer authorizes you to deliver concrete and agrees to pay for it. If it is necessary to turn an account over to an attorney for collection, the contract provides that the customer will have to pay the cost of collection including a reasonable attorney's fee. It is inevitable that some accounts will have to be turned over for collection, so this may save you quite a bit of expense over a period of time. The clause waiving exemptions prevents a delinquent debtor from hiding behind certain exemptions that are otherwise given to him by law.

This contract statement is simply a guide. You know your business better than anyone else. You know what your contracts should contain. If there is anything concerning your contract forms that you are in doubt about, it is suggested that you consult a lawyer and ask him to draft a simple contract for you. He will charge you very little, and he may save you a considerable amount of money and worry over a period of time.

There will probably be times, on large orders, when you will want a more comprehensive contract than can be embodied in your sales ticket. You can worry about this when the occasion arises but on any order, large or small, it is good business policy to make use of a written contract of some description. It will payrich dividends both in money and in preventing misunderstandings and disputes.



Good Advertising

• This unusual structure with its 22-foot cantilevered roof was built by R. H. Wright & Son both as an office-laboratory building and as an advertisement for the company's prestressed concrete. The roof is made with eleven 62-foot long precast, prestressed concrete joists. They provide a 40-foot interior span and a 22-foot cantilever. The units taper from 22 to 10 inches.

News of Product Plants

H. B. LAYNE CONTRACTORS, INC., Springfield, Ohio, has sold the firm's ready-mix concrete plant to the New York Coal Company.

PRICE BROTHERS, Dayton, Ohio, has indicated it may move a plant now located at Miami, Florida, to Little Rock, Arkansas, if the firm bids for and wins a contract for the concrete work on the Big Maumelle Dam project near Little Rock.

RAINS AND SON, Forrest City, Arkansas, recently began operations at its ready-mix plant.

TURBOTVILLE BLOCK COMPANY, INC., Turbotville, Pennsylvania, will start construction of a plant in Horseheads, New York. The company will manufacture prestress concrete slabs, beams and concrete building block units.

MIDYEAR CONSTRUCTION REVIEW

By GEORGE CLINE SMITH

F. W. Dodge Corporation

CONTRACT AWARDS for future construction in the 37 eastern states set all sorts of new records during the first six months of 1956 despite the fact that June got out of step with the other months and registered a slight decline. Coming at the end of the period as it does, the June drop makes it a little difficult to speak of the first half in a simple, cohesive way, but there are certain clear-cut facts which should not be lost to view.

One of these is that the first half as a whole was a tremendously active period for contract awards, with all that this implies for the future of actual construction spending. Another is that the June total of \$2.2 billion, even though it was below June of last year, was a huge figure, some 27 per cent ahead of the third highest June on record. A third fact is that an extraneous situation, the steel strike, is probably the dominant influence on the immediate outlook both for actual construction and for contract awards.

Total contract awards in the first half of 1956 amounted to \$13,199,000,000, the highest total in history and 10 per cent above the record set last year. Each major category also set a new record. Non-residential building, at \$4,608,000,000, was 11 per cent ahead of last year; residential building, at \$5,699,000,000, was up 5 per cent (although the number of dwelling units represented by the contracts was down 3 per cent) and heavy engineering, at \$2,893,000,000, was up 21 per cent.

The emphasis in the first half has continued to be on two main areas: business investment in new facilities, and public construction of all types. Business investment shows up in sharp gains in factory and commercial buildings and in utilities. Public construction is particularly strong in highways and schools. Shifts in the various categories have tended to balance out so that there is no change in the proportions of public and private contracts in the totals; as in the first half of 1955, private awards were 69 per cent of the total, and public awards were 31 per cent.

In this midyear review certain details of the Dodge contract award statistics are being made available which are not ordinarily made public. All figures below refer to the 37 eastern states, and are totals for the first six months of the year specified.

COMMERCIAL BUILDING: Awards for commercial buildings made up the largest single segment of non-residential building in the first half of 1956. The total of \$1.2 billion was 11 per cent above the previous record set last year, and the physical volume as represented by floor area was also a record.

Schools: The educational and science building category (primarily schools) was the second largest non-residential type. At \$1,156,000,000 the awards were 11 per cent ahead of the record set last year. This marks a continuation of the steady growth which has resulted in an increase every single year since the end of

World War II. Moreover, the 1956 figures indicate a considerable speedup in the rate of growth. In 1955, even though a new record was set, the total was only 4 per cent ahead of 1954, an increase which was so small compared to those of previous years that it aroused fears of a leveling off in school-building programs at a time when the number of children born was setting a new record.

Manufacturing Buildings: While this was not the largest class of non-residential building, and while it set no new records, it is perhaps the most significant of all at the moment because of its extremely sharp increase. Awards for manufacturing buildings totalled \$1,096,000,000, an increase of 29 per cent over last year and 88 per cent above 1954. This year's figure is far below the record of more than \$2 billion inspired by the Korean War in the first half of 1952, but it is far above any other first half in history.

Hospital and Institutions: This group has not been doing so well in recent years, although the contract award totals are respectably large. The peak of \$300 million was set in 1950, and since then first-half awards have fluctuated at considerably lower levels. This year's total of \$240 million is 14 per cent below last year.

Religious Buildings: The total of \$277 million for religious buildings was 3 per cent below last year's record, but it was still far higher than any other year. Strangely enough, the physical volume in the

first half of 1956, measured in floor area, was the highest ever recorded.

OTHER NON-RESIDENTIAL BUILD-INGS: Public Buildings totalled \$166 million, down 6 per cent from last year, but well above any other year. Social and recreational buildings set a new record at \$161 million, up 3 per cent from last year. Miscellaneous non-residential buildings also set a new record. The total of \$312 million was 18 per cent above last year.

RESIDENTIAL BUILDINGS: Awards for residential buildings totalled \$5,-699,000,000, a new record, a little less than 5 per cent above last year. The number of dwelling units involved, however, declined by 3 per cent. The differential reflects increased costs and larger size of housing units this year. The awards show a continuation of the trend away from apartments toward single family homes which was mentioned in last year's midyear review. Apartment contracts amounted to only \$328 million, the lowest figure in ten years, and 11 per cent below last year. Contracts for two-family houses rose 31 per cent above last year, but the total of \$106 million was still only a very small fraction of residential building.

PUBLIC WORKS: Contracts for public works continued their almost unbroken rise since the end of World War II, reaching the tremendous total of \$2,154,000,000 in the first six months of 1956. This is a new record 26 per cent ahead of the previous record which was set last year, and it indicates the great emphasis being placed on such heavy engineering projects as highways and flood control. Public works as used in this classification refers to the nature of the project rather than to the ownership. Most of the category is, of course, under public ownership, but private projects of a similar character are also included.

PUBLIC UTILITIES: This group also set a new all-time record at \$738 million, nearly 8 per cent above last year's record. This category also refers to a construction type, and includes both privately and publicly owned utilities; so far this year, a little more than half the contracts for utilities have been under private ownership.

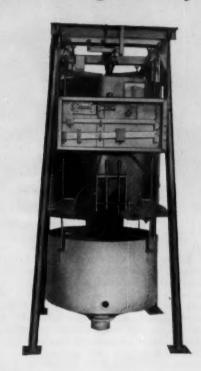
It should be clear from these facts that while practically all types of construction are at high levels, the principal boost this year has come from business investment in commercial, industrial and utility buildings, and public investment in schools, public works and also in utilities.

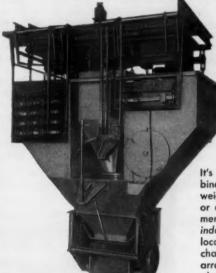
2 WAYS to increase batching efficiency

Accurate water weigh-batching

assures close quality control in production of ready-mix concrete. When water is batched by weight, accuracy is not affected by changes in water temperature gardless of whether cold water is used in summer, or heated to 180°F. in winter. Reservoir type batchers also maintain top-speed weighing, even where low water pressure is encountered. To get this speed and accuracy in your plant, specify a Johnson water batcher.

2 sizes: 120-gallon (1,000 pounds) for batches up to 3 yards, and 240-gallon (2,000 pounds) for batches up to 6 yds. Semi- or full-automatic.





Central cement-feed

prevents "gumming", reduces dusting, and pre-shrinks materials. You get this unique advantage with Johnson Concentric batcher, because the aggregates are arranged concentrically around the cement. All ingredients are intermingled as they flow through discharge.

It's two separate batchers combined in one unit. Aggregates are weighed on accumulative dial scale, or on individual beam scales. Cement is weighed separately on an independent scale in a centrallylocated, sealed hopper. Dual discharge available. Sizes: 2 to 8 yds., arranged for 2 to 8 aggregates, plus 1 to 4 types of cement. Manual, semi- or full-automatic operation.

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Holding Time —

is radio communication the best answer?

By PORTER V. TAYLOR

A SURVEY of the major producers and users of ready-mixed concrete in the South Florida area reveals that producers are almost unanimous in their policy of charging the customer for delay of ready mix trucks. Despite the fact that the customer generally objects to such charges, there seems to be little likelihood that the policy will be changed. Opinions as to where the responsibility for delay should be placed are far from unanimous.

A large percentage of the readymix jobs in Miami involves three groups; namely, the producer, the customer, and the crane firm doing the actual pouring. For the most part, each of these three groups feels that one or both of the other two cause most holding time and should bear the holding charge penalty.

The ready-mix men have one advantage in the Miami area, and that is the fact that they are associated

and have a more or less uniform policy. Theodore Pafford, Ramsey Brothers Company, is president of an association of 23 concerns which includes most of the major ready-mix companies. Mr. Pafford says "The association has no hard and fast rule about holding time, but most of the members follow a policy of 15 minutes free time per yard of concrete. After that, there is a holding charge of from \$4 to \$10 per hour per truck, depending on the size of the truck. Holding time is a burr in the throat, but we feel that it is necessary to save time for both the ready-mix companies and the contractors. When the lost time is due to conditions over which the contractor has no control, we cooperate by waiving charges, whenever it is possible for us to do so and still protect ourselves." Some of the conditions under which Ramsey Brothers does not make a holding charge are when trucks arrive

ahead of schedule, when trucks are stuck in sand on the job, or when delay is caused by rain.

Mr. Pafford says that the principal cause of holding time with their company is lack of coordination between the crane services and the contractor. Another reason cited by Mr. Pafford is reluctance on the part of the contractor to order enough concrete.

Ramsey Brothers operates a fleet of 8 mixer trucks. One of their means of maintaining better customer relations is to give advertising slide rules to the customers, with the hope that they will be able to make more accurate estimates of the amounts of concrete required. They also maintain a contact man who visits the job to offer the customer assistance and check on the amount of concrete needed. Two-way radio communication is maintained between the Ramsey plant and all their trucks.

• W. M. McDaniel, dispatcher for one of the branches of Ready Mix Concrete Company of Fort Lauderdale, demonstrates Telautograph equipment, which reproduces what he writes on its plate in the office and also in the batching tower.



September, 1956—CONCRETE



Now...Columbia Heavy Duty Standard racks can be shipped to your plant within a few days after your order is received. Columbia can also custom design racks from your blueprints or measurements to fit your special plant requirements.

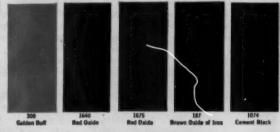
Racks are ruggedly constructed of high quality steel for all pallet and block sizes...and can be shipped sub-assembled for compact delivery and easier handling.

Send dimensions for your rack requirements to Columbia's engineering department. You will be furnished with prices at no obligation.

TURNTABLES

Ask about Columbia's new one, two and threerack motor-driven "push-button control" turntables. Also available in manual, semi-portable and fixed position combinations.





A guide for choosing concrete colors

For producers of split blocks, patio blocks, concrete blocks and other colored concrete products.

Manufacturers of colored concrete products agree . . . The pigments they use must have these 3 important qualities:

- 1. A high degree of tinting strength when added to the mix
- 2. Color uniformity year in, year out
- 3. The ability to incorporate easily

Manufacturers also require a pigments supplier whose technical department is capable and cooperative, whose shipping service is prompt and dependable.

Point for point, REICHARD-COULSTON quality-controlled pigments and dependable service meet *all* these requirements!

The shades shown above are just 5 of the many concrete colors manufactured by REICHARD-COULSTON. Included are yellows, buffs, maroons, grays, reds.

For a free color card, fill in and mail the coupon. Act now.

GENERAL RECOMMENDATIONS: PASTELS (Split blocks and similar products), 2-4 lbs. for each bag of cement. DEEP SHADES (Patio blocks, concrete blocks, etc.), 6-8 lbs. for each bag of cement.

Reichard-Coulston, Inc.

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Over a century of manufacturing and service

REICHARD-COULSTON, Inc.

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Lewis Schilling, president of I. E. Schilling Company, says his company follows the same policy of 15 minutes free time per yard of concrete, with a minimum holding time charge of \$4 per hour for extra time. The Schilling Company also waives holding time under certain conditions. For example when a contractor is hiring a crane man to pour and the crane arrives late, the holding charge is sometimes presented to the crane service firm. Admittedly, collection from such concerns is not as successful as collecting from the customer. Mr. Schilling says: Our collections vary in degree according to supply and demand, and action of our competitors. However, we do make an honest effort to collect for holding time, because we feel that it is important to keep our trucks on the move and also because unnecessary delay affects the quality of the concrete.

The Schilling Company has met holding time problems with both large and small contractors. While large companies usually have better organized systems, sometimes the holding time charges are paid without any corrective action being taken. With the smaller contractor, the charge is more likely to be felt, and he is more likely to take corrective action.

John Martin, sales manager for Maule Industries, says: "We allow the first 15 minutes free time per cubic yard. After that, our holding time charges are from \$6 to \$10 per hour. Any variance from these charges depends upon the individual situation. Rain, early arrival of trucks, or trouble with equipment, are usually accepted as legitimate causes for waiving the charge."

Maule maintains a staff of 7 con-

tact men who visit the actual pouring jobs to offer advice on how to eliminate holding time. One of their most recent moves, which has helped to prevent holding time, has been the installation of two-way radio communication between plant and truck. At their Wilton Manor plant in Fort Lauderdale, they found that for every 10 to 12 radio-equipped trucks, they were able to make enough saving in truck time to equal an additional truck. Mr. Muncie Lewis, superintendent of truck delivery, says "We have found that two-way radio will enable us to increase deliveries from 10 to 15 per cent." This practice has also brought about a savings in plant time, by making it possible to shut down mixer plants in the afternoon without having to wait until all trucks have returned. After the initial experiment at the Wilton Manor plant, Maule Industries has gone ahead and equipped their entire fleet with two-way radio communication.

Gary Marable, vice-president of Ready Mix Concrete Company, at Fort Lauderdale, Florida, says that he feels that the holding time charge is beneficial to the customer as well as the ready-mix company. "When the contractor or top management personnel sees a holding time charge, the shock should call their attention to the fact that something is wrong. In large firms, the man doing the work is often too far removed for top management to be aware of a lack of coordination or a waste of time. If our holding time charge brings attention to the fact that schedules are not being maintained. it will probably prove beneficial."

Although the practice of charging for holding time is not recognized as a complete cure by Ready Mix, it

is considered the best solution to date. Salesmen for Ready Mix also keep in contact with pouring operations and try to persuade the contractor who is using a crane service to order a little extra supply of concrete. It is pointed out that smaller pours such as patios or doorstops can absorb the leftover more conveniently than having to order a small amount to complete a pouring job. Ready Mix has also found it advantageous to recommend reliable crane services to their customers. This company also feels obligated to make delivery on schedule, and will accept part of the cost if a contractor is holding a crane for a certain time and delivery is delayed. "We feel that it is only fair", says Mr. Marable, "for this situation to work both ways. If we are excessively delayed in making a delivery, and a contractor is paying a crane to wait, we are willing to bear part of the cost."

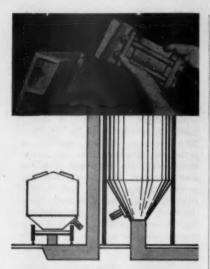
Another system in use by both Ready Mix and Maule is the Telautograph, which is a means of sending written communications by wire. The dispatching offices of both these firms are equipped so that the dispatcher can write an order on a metal plate and it is reproduced simultaneously on a roll of paper in a machine at the dispatcher's desk and another in the batching tower. This reduces the possibility of the batch man making an error in the amount or the mix design of the order. Heretofore, an intercom system was used between dispatchers and the batchers.

Ready Mix will soon have this system installed so that it will also operate from their main plant at Fort Lauderdale to branches at Hollywood and Pompano Beach.

In summing up the reasons given by ready-mix men as causing hold-



• Here are two of the fleet of radio equipped trucks now in use at the Wilton Manors plant of Maule Industries. The radio tower and the batching tower for the plant are shown in the background.



BETTER THAN TWINS

One Cleveland LSRR Vibrator will do two jobs for concrete plants. It can be used to unload cament from covered hopper cars, and then switched to trackside storage to guarantee a full flow from this bin.



The LSRR is also ideally suited to vibrating the forms of larger concrete products.



The HCLSRR is equipped with both a hydraulic C clamp and a male bracket for use on self clearing hopper cars for unloading sand and aravel.

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CONCRETE-September, 1956

EXTRA REACH

with Precision Touch



Here the new H-5 Hydrocrane places pre-cast concrete slabs on an ice cream plant construction job. Every crane function fully hydraulic powered and controlled — boom and line hoist, swing, outrigger set and retract, boom telescope, bucket open and close. Crane travels up to 50 mph on highway, has up to 240 fpm line speed, is available with clamshell, crane hook, magnet.

New 1/2-Yd., 10-Ton H-5 Hydrocrane

The Bucyrus-Erie H-5 Hydrocrane combines 50 feet of boom reach, plus a 20-ft. jib extension, with all the work advantages of smooth, precise, hydraulic power and control, all the travel advantages of a conventional motor truck. In addition, the boom extends or retracts hydraulically within a 12-ft. range — while the crane is working. With this machine you can place concrete planking . . . set slabs of facing stone in place . . . hoist concrete buggies and other building materials to upper stories . . . move equipment and supplies — do all these jobs — and more — with a smoothness and safety never before possible in the range of a 50-ft. boom.

New Flexibility, New Travel-Ability

Patented outriggers permit you to mount the crane on a new or used commercial truck of your choice. You can select a heavy tandem truck for heavy-duty work or a lighter truck for fast between-job travel. Both the high-lift 50-ft. boom and the standard 36-ft. boom retract to 25 feet for travel. Over-all length for travel, depending on truck, is under 35 feet.

Find out how the new H-5 Hydrocrane can speed your building jobs. Write today for new literature or see your Bucyrus-Erie distributor for a demonstration.

BUCYRUS-ERIE COMPANY

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ing time, the most frequent difficulty in the past has been lack of coordination between the customer, the crane service, and the delivery truck. Two means of solution have helped to reduce this problem considerably. They are radio communication, and a policy of having the customer place an order on hold, to be delivered at a time specified by the crane operator.

The second most prevalent difficulty stems from inaccurate estimates of the amount of concrete needed for the job. The ready-mix men can do little about this situation other than to constantly endeavor to have their salesmen and field contact men stress the importance of ordering enough to do the job.

Crane men receive a considerable amount of criticism from both the contractor and the producer. Most of this criticism has been aimed at newcomers to the field, or one-crane operators. In addition to the numerous one-crane owners, there are 20 or more crane firms using 3 or more cranes exclusively for pouring con-crete. Most of these crane services sub-contract the pouring from the original contractor, and they are in the middle, between the contractor and the ready-mix producer. Perhaps this accounts for their being on the receiving end of so much criticism. With traffic conditions what they are in South Florida, it is no easy matter to move a crane, or even a ready-mix truck, across town. Numerous draw bridges and traffic jams are encountered

A typical crane operator, William F. Fricke, who operates 3 cranes exclusively for pouring concrete, says their group is in need of a central organization and a uniform operating policy. Some crane men belong to engineering contractor's societies, others to steel erector's groups, and some to general contractor's organizations. Mr. Fricke says that the best means of preventing a holding time charge is the policy of permitting the contractor to place a hold order with the producer to be released on call from the crane man. If the crane man is experienced and encounters no unusual difficulty, he can estimate the time he will arrive at a job, and place a telephone or radio order with the ready-mix plant so that the concrete will arrive at the proper time. Mr. Fricke estimates that about 50 per cent of his pouring is now handled under such a system. When he gets an order for a pouring job, the customer gives him the name of the concrete company, and lets the concrete company know the name of his crane man. This transfers coordination responsibility from the customer to the crane man. However, the concrete company still holds the customer responsible and bills him for any holding time. Crane operators, as a rule, do not charge for waiting time up to 30 minutes. And, by the same token, they are reluctant to accept responsibility for holding time charges from concrete companies. Crane men concur with the ready-mix people in blaming the contractor for inaccurate estimates of the amount of concrete needed.

The customer takes a dim view of holding time charges, on the basis



 Yard Superintendent Al. R. Pagett demonstrates use of two-way radio equipment used to maintain contact with all ready mix trucks in use at the Wilton Manors plant of Maule Industries.

of the fact that as a general rule he is unable to make a charge to the concrete company when trucks arrive early, late, or 3 or 4 at once. Contractor Angus Graham says "We realize that a holding time charge is sometimes warranted, but the ready mix men should also be responsible for making deliveries according to schedule, and for spacing arrival of trucks at regular intervals and according to method of pouring being used. I have had one truck arrive late, to be followed by two more arriving at once. I have even refused to accept delivery of concrete when it was obvious that it would be held long enough to affect the quality."

Jerry Nagel, vice president of Witters Construction Company, speaking for his firm said "We do from 2½ to 3 million dollars worth of construction per year, but we have little trouble with holding time charges because most of our work is commercial and we use our own cranes."

Robert Martin, secretary-treasurer

of Martin Brothers, a firm which specializes in building homes in the 30 to 40 thousand dollar category, says "We use a rental crane service, and order our concrete on the hold method to be released by the crane operator. We make every effort to be ready for the concrete when it arrives, but when it is promised at a certain time, we expect it then. Some suggestions made by Mr. Martin for avoiding holding time charges pertained to innovations on ready-mix trucks. He suggested that the concrete men consider a portable pressure pump with a hose, which would permit pouring directly from the truck to the form, thus eliminating the crane problem. Another suggestion was the addition of an extra length of chute as a means of speeding delivery.

For the time being, it appears that holding time charges are here to stay; but with increased efficiency in communications, there will probably be less conflict on this score than there has been in the past.

Texas Industries Acquires New Firm

Texas Industries, Inc., Dallas, Texas has acquired all assets of Twin City Concrete Products Company of Minneapolis, Minnesota, along with that company's exclusive right to sell Sakrete premixed dry concrete in eight middle western states.

New Concrete Pipe Plant Completed

The United States Concrete Pipe Company and Universal Sewer Pipe Corporation recently completed a concrete pipe manufacturing plant at Ft. Lauderdale, Florida. The plant is the ninth pipe-making plant of the two firms which operate under one management. It will produce all concrete pipe types and sizes, including vitrified clay-lined concrete pipe, and Tylox flexible couplings for concrete pipe jointing. Facilities of the plant provide for manufacturing special pipe to meet job specifications.

odson's igest



Larry Dean gets a tip on summer concreting

Walked into the local beanery for lunch the other day, and I spotted Larry Dean wildly waving me over to his table. Larry is a paving contractor, and he was working on a highway job nearby.

"So you're still trying to lick the national highway program singlehanded!" I greeted him. "How's it coming?"

"Lousy, thank you," Larry replied sadly. "It's this crazy weather we're having this summer . . . one day it's cold, and the next day the thermometer bursts. On top of that, it seems like it's raining half the time. And you know how concrete acts up in weather like that!"

"You sound like a man who's not using Calcium Chloride in his mix," I observed. "Am I right?"

"Well, yes," he admitted, "but it's not really cold enough . . ."

"Not cold enough!" I broke in. "Did you know that, even at 70 degrees, Calcium Chloride increases the strength of concrete 145 per cent in 24 hours? What's more, you'll get better workability at any temperature. Besides..."

"There's only one thing wrong,"
Larry protested, still not convinced.
"I figured my bid pretty close on this
job, and I didn't allow any money for
Calcium Chloride."

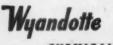
"Don't let that stop you," I assured him. "After you see what Calcium Chloride will save you in time and labor costs, you'll be money ahead."

Larry gulped down his coffee and started for the door. "So long, Dod!" he yelled over his shoulder. "Got to hurry if I'm going to try this Calcium Chloride idea this afternoon."

A few minutes later, our waitress came over. "Here's the check, Mr. Dodson," she said. "On his way out, Mr. Dean told me I should give it to you, because you were giving out good tips today."

— L. D. Dodson

P.5.—Wyandotte Calcium Chloride is now available in convenient, economical pellet form. You can find out all about it in our new booklet, "Pellets . . . a new form of Wyandotte Calcium Chloride." Write me for your free copy. Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.





MICHIGAN ALKALI DIVISION
HEADQUARTERS FOR CALCIUM CHLORIDE

PRE-MIX OPERATORS

... now you can handle jobs

MANY MILES AWAY



DEMAND THE BADGE OF DEPENDABILITY



...with the new super



agitator

Made by the makers of the famous ROCKET Revolving Drum Truck Mixer How many jobs have you missed—jobs just a little out of reach of your non-agitating equipment? Or how many times have you arrived on the job with a soupy, segregated mix? With the new, 6½ cu. yd. super Hi-Lo agitator, you can make hauls that once were far out of range. Condition the mix as you go along—it's the same high quality when you pour as it is when it left your plant mixer.

Hi-Lo is probably the *least* expensive machine of its kind on the market. But more important, it is one of the least expensive machines to operate.

You see, the super Hi-Lo has a lot of sensible features that reduce maintenance, increase operating efficiency: Wide open top, replaceable liners of abrasion resisting steel, 180° swing chute with extension, sliding gate (no seal to replace), non-leaking, self-tightening packing glands, power takeoff, drive, replaceable blades and many others.

If you'll take a couple of minutes and send us the coupon, we'll show you how the new super Hi-Lo can be the key to higher profits for you!

MAIL THIS COUPON TODAY!

CONCRETE TRANSPORT MIXER CO.

4983 Fyler Ave., St. Louis 9, Me. FLanders 2-7800 terms on the following:

New Super Hi-Lo Agitator (Model 625)

Batching Equipment Water Meters

Gentlemen: Please rush full information, prices and

Batching Equipment Water Meters
Hi-Le Stationary Drum Truck Mixers
New Rocket Revolving Drum Truck Mixers
Material Handling Equipment

Material Handling Equipment

Firm______

Address State

Air-Cavity Block

Two separate units bound together in normal production cycle to make a miniature twin wall

A new "air-cavity" concrete building unit that is said to simplify and reduce the cost of masonry construction, and the automatic equipment for its manufacture, developed by the Presto Block Machine Corporation of New York. Its sponsors declare that the product, Presto Block, meets every requirement of cost-conscious builders, architects and homeowners for a low-cost, easy to erect building unit.

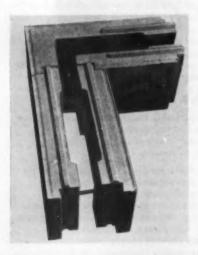
According to the manufacturer, each is a miniature "twin-wall" in

itself — comprised of two separate concrete units bound together by corrugated steel ties which are inserted automatically by the machine during the normal production cycle. The top, bottom and end surfaces are keyed to lock upon erection, thus permitting a wall to be laid so that at no point do the inner and outer walls have a "through" masonry bond. The "twin-wall" design also simplifies the installation of electrical wiring and plumbing. Due to the through air space created by the

double wall construction, it is claimed that no furring is needed.

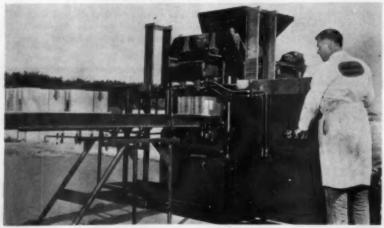
The blocks are laid with no mortar between joints, thus eliminating costly mortar tubs and heavy construction scaffolding. After the wall is erected, the keyed joints are pointed by hand or with a mortar gun to provide extra strength and a permanent moisture seal. Ease and simplicity of erection are said to make the unit a particularly desirable "do-it-yourself" item for the construction of patios, outdoor fireplaces, garages and many other simple building jobs, which now add up to a national multi-billion dollar business.

Present plans for manufacturing Presto Block involve exclusive territorial franchises, which will avoid competition between franchise holders. The Presto Block Machine Corporation, Empire State Building, New York, has recently completed manufacturing contracts with Columbia Machine of Vancouver, Washington, to produce the necessary machinery and equipment.



• LEFT: Interlocking assembly of stretcher and corner block. RIGHT: No mortar is required until wall is erected; then joints may be pointed by hand or with a mortar gun. Note the through air-cavity of twin-wall construction.





 Hydraulically-operated Presto block machine in action. Automatic pin injector is synchronized with pallet feed, to insure no slow-down of production cycle.



On bins, hoppers, chutes, forms, screens, etc. operation reach their peak, efficiency with SYNTRON ELECTRIC VIBRATORS. Production goes up and cost down — when SYNTRON ELECTRIC VIBRATORS are used to eliminate work stoppages due to arching and plugging of materials supply lines. Sturdy and powerful, they set up to low of 3600 controlled vibrations per minute to keep materials on the move. Electromagnetic design — little or no maintenance. Available in sizes to meet every requirement.

Other Syntron Equipment of Proven Dependable Quality

GRIZZLY BAR SCREENS

For heavy connage at low cost, high speed, controllable feeding and scalping in one operation. Low cost coarse separation of materials.





Eliminate the possibilities of error. Provide high spread, accurate sizing of test samples. Positive control of time.

FEEDER MACHINES

Complete with storage hopper vibrator and leader. For controlled feeding of bulk ma-



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High Early Strength

Cold Weather Safety Higher Ultimate Strength

Get All <u>3</u> By Adding

Solvay Calcium Chloride To

Cold Weather Concrete

You can offset the strength and time losses resulting from temperatures of 50°F. or lower and gain in ultimate strength by adding Solvay Calcium Chloride to your concrete mix.

Speed finishing, remove forms earlier, save 2 — 4 days operating time. Get all the facts and figures in the booklet entitled,

"The Effects of Calcium Chloride on Portland Cement".

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Please send me WITHOUT OBLIGATION OR COST your booklet:

- ☐ "When the temperature drops BELOW 50°F., do you know what happens to CONCRETE?"
- ☐ "The Effects of Calcium Chloride on Portland Coment."

..........

COMPANY POSITION

ADDRESS

ADDRESS

..... ZONE STATE CO-9

Edick Appointment

The appointment of Lou Bucheit as its full time representative in western New York and western Pennsylvania has been announced by Edick Laboratories, Inc., Milwaukee, Wis-consin. Mr. Bucheit will devote all of his time to calling on and working with manufacturers of concrete blocks and concrete products in this territory.

Vermiculite Cuts Costs

Builders who are offering air conditioning in concrete block homes can save two ways by filling cores of blocks with vermiculite insulation, according to Clifford Warren, vicepresident, Black and Ryan Air Conditioning Company, Phoenix, Arizona.

Citing two homes constructed in Phoenix, Mr. Warren stated that where Zonolite vermiculite was in the cores, a 3.2 ton air conditioning unit would do the job requiring a 4-ton unit in the uninsulated house. Savings in initial equipment amounted to \$250. Since only \$120 worth of vermiculite was employed in blocks, a net savings in construction of \$120 was accomplished. According to Mr. Warren, savings in operating costs would amount to \$40 a year in the house insulated with vermiculite, figuring \$50 per ton for operating costs yearly.

Heltzel Chief Engineer



W. J. Kirchner

The appointment of William J. Kirchner as chief engineer of The Heltzel Steel Form and Iron Company, was announced recently by Carl J. Heltzel, president. He been with the

company for seven years and has held the positions of design engineer, field engineer and supervising engineer of bin design section. Mr. Kirchner succeeds Fred Mittelstadt who recently retired.

Lehigh Service Manager

Lehigh Portland Cement Company, Allentown, Pennsylvania, recently announced the appointment of A. G.. Fallat as service manager. A. G. Watt, who is retiring as service manager, will continue with the company in an advisory capacity.

Chain Belt Changes



W. J. Sparling

president of Chain Belt Company has announced certain reassignments of executive responsibilities. W. J. Sparling, now vice president in charge of Mil-waukee opera-

L. B. McKnight,

tions, will become vice president manufacturing and industrial equipment, and will have executive responsibility for those divisions making up the industrial equipment section. O. W. Carpenter, vice presi-dent of finance, will be vice president construction machinery and fi-



E. M. Rhodes

nance. He will have executive responsibility for those divisions making up the construction machinery section.

E. M. Rhodes, divisional manager of the firm's eastern operations, will be located in Milwaukee and will fill the newly created position of manager of chain operations. He will be responsible for the operations of both the chain and transmission and the roller chain divisions of the industrial equipment section. J. D. Sloan, assistant manager, roller chain division, will succeed E. M. Rhodes as manager of that division. A. K. Thomas, present manager of the construction machinery division, will become assistant to the vice president of the construction machinery section. W. C. Messinger, sales manager of the construction machinery division, will become manager of that division. J. W. Lendved, director of engineering for the construction machinery division, will also serve as director of product development for that division.

New Reo Office

Construction was begun recently on a new office and service building for Reo Motors, Inc., at Dallas, Texas. Offices of both the Dallas factory branch and the regional headquarters will be moved to the 21,000-squarefoot building when it is completed in November.

Medusa President Succumbs

Jonathan Blaine John, chairman of the board of directors of the Medusa Portland Cement Company died recently at the age of 86. Mr. John had been chairman of the Medusa board since 1951 after having been president of the company since 1922. He was credited with being the "father" of the safety movement in the cement industry and was chair-man of the Portland Cement Association's accident prevention committee for 10 years.

Southern Sales Manager

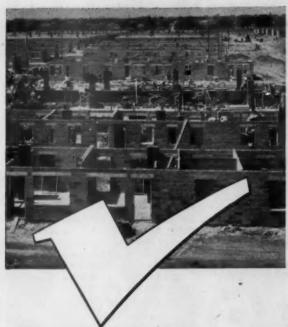
The Alpha Portland Cement Company, Easton, Pennsylvania, has announced the appointment of H. Eugene Brown as southern sales manager succeeding Charles P. Postelle who retired recently. Mr. Brown joined Alpha in 1924 and has been sales representative and assistant district manager in the Ohio-West Virginia-Kentucky territory prior to his recent appointment.

Blaw-Knox Appointment

Blaw-Knox Company, Pittsburgh, Pennsylvania, has announced the appointment of A. H. Jackson as vice president and general manager of its equipment division plant at Blawnox, Pennsylvania. Mr. Jackson succeeds Captain E. C. Rook, who recently was advanced to vice president and general manager of the Fabricated Products Group.

Master Builders Appointment

Appointment of William B. Phillips as vice president of operations and administration of The Master Builders Company, division of American-Marietta Company, was announced by S. W. Flesheim, board chairman and E. L. McFalls, president. In his new position, Mr. Phillips will be responsible for manufacturing, purchasing and traffic activities and will continue to occupy his former position as vice president of administra-



Check these construction practices to strengthen your market for

CONCRETE MASONRY

The first requisite for a successful concrete masonry business is making block that comply with applicable specifications for strength, dryness and absorption. However since your customers buy walls, not block, you can strengthen your market by making on-the-job inspections to promote quality construction. Use this check list:

- 1 See that concrete block stored on the job are protected from rain and snow.
- 2 See that tops of unfinished walls are covered each day to keep moisture out of cores in block.
- 3 Make sure that the masons do not pre-wet the block before applying mortar.
- 4 Discourage notching or cutting block around pipes, as this creates weak vertical sections.
- 5 Advise use of control joints to relieve stresses due to shrinkage and temperature changes.
- 6 Advise painters to let surface of caulking compound in control joints harden and then coat with shellac to prevent oils from bleeding through where portland cement base paint is to be used.

Send for free"Concrete Masonry Handbook." It is distributed only in the U.S. and Canada.

PORTLAND CEMENT ASSOCIATION

Dept. 9-14, 33 W. Grand Ave., Chicago 18, III.

A national organization to improve and extend the uses of portland cement and concrete...through scientific research and engineering field work

CASH IN ON THE DEMAND for Dur-O-wal



6 Reasons why Dealers Stock Dur-O-waL

- · Dur-O-waL is called for by name
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DUR-O:WAL

the Backbone of Steel for EVERY masonry wall

Phone, wire, or write Dept. 5P for the name of your nearest distributor



Dur-O-wal Div., Cedar Rapids Block Co., CEDAR RAPIDS, IA. Dur-O-wal Prod. Inc., 8ox 628, SYRACUSE, N.Y. Dur-O-wal of III., 119 N. River St., AURORA, ILL Dur-O-wal Prod. of Ala., Inc., 8ox 5446, BIRMINGHAM, ALA. Dur-O-wal Prod., Inc., 4500 E. Lombard St., BALTIMORE, MD. Dur-O-wal Div., Frontier Mfg. Co., 8ox 49, PHOENIX, ARIZ. Dur-O-wal, Inc., 165 Utoh St., TOLEDO, ONIO

Soiltest Catalog—A 128-page catalog contains descriptions and illustrations of over 1350 items of apparatus for engineering tests of soils, concrete, asphalt and construction materials. Included are suggested laboratory layouts with equipment lists and excerpts from ASTM and AASHO specifications. The concrete section is devoted to a wide variety of apparatus for compression and flexure testing, slump, mixing, molding flow, vibrating, air entrainment,

volumetric measurements, curing and cement testing. Soiltest, Inc., 4711 W. North Avenue, Chicago 39, Illinois.

EQUIPMENT SELECTOR—A slide rule type equipment selector shows the productivity per man hour and the cost per yard of placing concrete for various distances of pours and labor rates with the use of wheelbarrows, hand carts, and model 15A Prime-Movers. Prime-Mover Company, Muscatine, Iowa.

BULK CEMENT HANDLING—A 4-page, 2-color bulletin on bulk cement handling illustrates how cement may successfully be handled in bulk. Bulletin FK-27 clearly points out the ease and speed with which a barge is loaded at the rate of 1000 bbl. an hour from a car spotted on the dock. Nine photographs and a drawing illustrate the barge loading and unloading procedure. Fuller Company, Catasauqua, Pennsylvania.

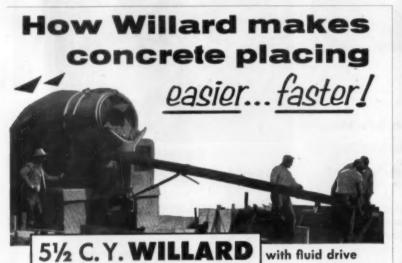
CONCRETE PIPE—A booklet entitled "Facts About Concrete Pipe Culverts" is designed to present the background and facts about concrete culvert pipe. It gives a broad, overall picture of the qualities, uses and general characteristics that make concrete culvert pipe an economical and widely accepted material for culverts and other drainage purposes. Concrete Products Association of Washington, 328 Third Avenue West, Seattle 99, Washington.

COUPLING SELECTION CHART—A new coupling selection chart reduces the time necessary to select a flexible coupling to a matter of minutes. The chart, 22 inches by 17 inches, may be hung on the wall, inserted under a glass desk top or folded for easy filing. Morse Chain Company, Industrial Sales Division, Ithaca, New York.

Bagging Scale—Design, operation and key features of a new automatic bagging scale specially designed for the pre-mix concrete industry are described and illustrated in a two-page, two-color bulletin No. 6041. The Richardson Weighblender automatically weighs, proportions, blends and bags any three dry mix ingredients. Richardson Scale Company, Van Houten Avenue, Clifton, New Jersey.

Symons Catalog—A 24-page general catalog in three colors, describes in detail concrete forming equipment manufactured by Symons, including the all wood panel, steel ply, high strength panels with steel cross members, H form, Champ form, mag-ply panels and steel strut wide panels as well as the firm's line of hardware, including wire ties. Symons Clamp & Manufacturing Company, 4249 Diversey Avenue, Chicago 39, Illinois.

Precast Slabs—Samples of how precast concrete slabs lend themselves to use in church buildings are clearly presented in a 6-page booklet. The booklet is fully illustrated with both interior and exterior photos of recently-constructed churches from all over the country. The Flexicore Company, Inc., 1932 E. Monument Avenue, Dayton 1, Ohio.



HELPER FINS at mouth of drum discharge smoothly without surge.

SINGLE LEVER CONTROL operates throttle and drum brake.

DRUM BRAKE prevents roll back and concrete re-surge.

CLUTCH ACTS AUTOMATICALLY when shifting gears to mix or discharge.

EXTRA LONG CHUTE is 17 feet with extensions.

HYDRAULIC LIFT ARM raises or lowers end of chute for accurate placing.

See your local Willard dealer or write for descriptive bulletin.

Manufactured in Los Angeles, California and Galion, Ohio

WILLARD CONCRETE MACHINERY SALES COMPANY

11700 WRIGHT ROAD, LYNWOOD (LOS ANGELES COUNTY), CALIFORNIA



WILLARD TRUCK MIXERS

Give Customers Beautiful Split Block Like This—



made from Block produced on a Besser





BES-STONE
Block
Splitter

Yes—split block is beautiful if it's made right, using a Besser Vibrapac and Bes-Stone Splitter—the combination that gives you NEW PROFIT OPPORTUNITIES plus SATISFIED CUSTOMERS. Get all the facts from your nearby Besser Representative, or write for literature to:

BESSER COMPANY

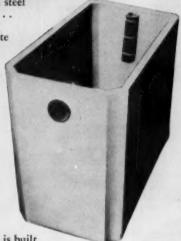
Complete Equipment for Concrete Block Plants
A L P E N A, M I C H I G A N, U.S.A.

THE SMITH
SEPTIC TANK FORMS
AND TRUCK HANDLING RIG



From the SMITH steel septic tank form... to the finished reinforced concrete septic tank...

for production of 500; 600; 750 and 1,000 gallon units



SMITH truck rig is built to give many years of continuous service. Entirely operated by one man.



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Dead Give-Away

One of the fastest growing phenomena — and biggest headaches in business these days is the gift-giving gambit. Many businessmen seem to feel obligated to hand out gifts to their customers at certain times of the year. Some do it because they feel it's a good and legitimate sales promotion device: others because they are driven to it by the gift-giving activities of their competitors. At any rate, it's estimated that company gift lists at Christmastime alone add up to a billion dollar business. Influencing friends and customers by handing out gifts is no longer a simple gesture of good wishes. Rather it has become a way of doing business.

Without condoning the practice, it seem sensible to suggest that if you are going to indulge in it at all, you should use good judgment in getting the most out of your business gift dollar. Recently New York held its first Business Gift Show. From this show came a number of hints — as reported in Printer's Ink Magazine — to guide the businessman in making a judicious selection of customer gifts. Here are some of the more important suggestions:

1. Gifts for the home are increasing in popularity.

The unusual gift — not necessarily the expensive one — is best received.

The gift with a personal touch most often strikes a responsive chord.

Gifts make a better impression when sent to the home rather than the office.

Improper spelling of the name on a gift card can wipe out whatever goodwill the gift might have created.

6. People like to receive gifts that are decoratively wrapped.

7. More and more businessmen are sending gifts for occasions other than Christmas. Your gift is sure to have a greater impact if it doesn't arrive in the midst of a flood of other gifts. It might be wise to consider sending gifts at Easter, Thanksgiving, or on some other "different" occasion.

8. Christmas gifts should arrive

well ahead of time; otherwise they leave the impression of being a lastminute decision.

Don't check up on a gift; if you want to make sure it was received, send it by registered mail.

10. Don't commercialize Christmas by flaunting the company name on gifts.

11. Don't buy cheap gifts. If your budget is strictly limited, look for good gift values rather than phony bargains.

A recent Fortune Magazine survey on business gifts turned up the following tabulation of the types of gifts given most frequently:

Food Products	36.1%
Liquors	27.8%
Household gifts	15.3%
Leather goods	13.5%
Wearing apparel &	
	10.6%
Sports equipment	6.5%

(The total is more than 100 per cent because of multiple gifts received by some of those surveyed.) The survey also turned up the feeling among numerous recipients that too many gifts have little or no meaning and would do a much better job of building good will if more time were put into their selection. It's a sad commentary on our civilization that gift recipients can parcel out their gratitude in relation to the type of gift and how, when and where it's presented. But such is the case, so if gifts are in your sales promotion program, then give them intelligently. Not only you but the recipient will get the most out of them.

Help Wanted

Do you know how important salesmen are? Here's what Al Seares, vice president of Remington Rand, has to say: "The only way we can keep the production machinery going is by moving its output at the end of the line. Each industrial salesman keeps 31 factory workers busy. He's the key man in our economy right now."

Several sources estimate that one million new salesmen are needed —

and that one million new salesmen aren't available. They are needed because the country is producing about a billion dollars worth of goods more than it is consuming; and because only increased consumption can provide the revenue that will give the country a balanced budget, adequate defense, and a rising standard of living. They aren't available because today it's the depression kids that are coming out of schools, and there are so few of them; and because the great to-do about the need for technical men in the country, combined with the obvious initial cash advantage technical jobs offer, has snagged much of the current college crop. People in the business world seem to have failed to sell selling.

The big problem now is to formulate new concepts of selling that will enable each of the four million salesmen who are working now to sell 25 per cent more this year, and twice as much in the ten years to come. Added emphasis is being placed on the salesman as a specialist, as a merchandising consultant - as a jack-of-eachtrade. Basic to the solution is the tenet that the bigger job the salesman is expected to do definitely deserves bigger pay, and more attention to his wants and needs. To quote Mr. Seares again: "The future of America rests with the ability of our distribution system to move the end products of our growing manufacturing facilities in sufficient volume to maintain full employment." The salesman is pretty important.

September Song

Now is the time to call on those customers who told you to come back later, after vacation. It's the cool of the year, the back-to-school, back-to-business time, and everyone is (or should be) raring to go. One bright salesman keeps a filing case with the summer stallers marked with bright stickers. First week in September he mails a reminder note to each one, reviewing their last conversation, and makes an appointment to call. It works for him — might for you.

Window Dressing

Here's a simple and provocative new idea on the use of business envelopes as a sales or public relations tool. A hotel chain sends out its bills in window envelopes. When the bill is removed, the following message is found printed on the inside of the envelope: "Thank you, we appreciate your business."

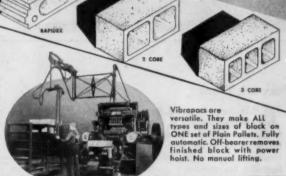
Concrete Filler Block for Fire-Safe FLOORS and ROOFS

Why make only the walls of a new building fire-safe and permanent?

Why not also apply these practical advantages to the floors and roofs? Concrete Filler Block, produced on a Besser Vibrapac, make it possible for the ENTIRE structure to be fire-safe and permanent... at LOW COST.

ALL made on a BESSER VIBRAPAC

Concrete Filler Block are made on a Besser Vibrapac... the same dependable machine that produces high quality concrete load bearing block for walls. And the same Plain Pallets are used. All types of filler block can be made in various sizes to coordinate with other modular materials and for all load conditions. Block plant operators can materially add to their profits by supplying their customers with BOTH wall and floor units. For further facts, contact your nearby Besser representative, or write:



BESSER COMPANY . Complete Equipment for Concrete Block Plants . Alpena, Michigan, U. S. A.

CONVEY, TRANSPORT BULK MATERIALS

the Faster, Cheaper Way...

WITH

Baughman EQUIPMENT

BAUGHMAN Model 210 inclined ELEVATOR

Spaced buckets-on-belt; lengths from 20' to 60'; buckets available in 8" to 18"; widths; with 11 inch buckets, the model 210 has approximate capacity of 50 tph for 100-lb. material. Write for Bulletin A-392.

BAUGHMAN Model TST-10
Bulk Cement Transport Body

Custom-built for trucks or trailers. Twinauger discharge. All controls outside of body. Lengths 9' to 35'. Bulletin A-376.





BAUGHMAN MANUFACTURING COMPANY, INC.

102 ARCH STREET . JERSEYVILLE, ILLINOIS



Barbecue and Incinerator

T HIS cadmium-plated, rust-proof, pan type mold produces a combination barbecue and incinerator unit. The unit produces interlocking corners that are secured on the site by No. 9 wire cast right in the heat resisting concrete. The base mold is designed to produce a self-centering casting which makes assembly easy. The finish can be white or color can be brushed into it. R. L. Spillman Company, 1535 Frebis Avenue, Columbus, Ohio.

Fork Lift Truck

T HIS fork lift truck, the Rinson Model NF-4, can be towed to the job at highway speeds. The new model features a special towbar attachment, enabling the fork lift to be towed by the truck. Large wheels, high ground clearance, and semi-rigid framing are also important features for use over curbs or rough ground. Rinson Fork Lift Trucks, 725 E. Huntington Drive, Monrovia 8, California.

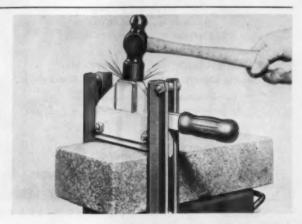


Proportioning System

THIS fully-automatic electronically controlled proportioning system automatically records formulas and weighings on a summary punch card by means of a recording device interlocked with the action of the panel. The system combines the automatic proportioning features of a Richardson Select-O-Weigh control system with an IBM printing summary punch. Information is transmitted from the Select-O-Weigh system by means of digitizing equipment, which digitizes individual weighing and sends the information to an IBM Type 526 summary punch. Richardson Scale Company, Van Houten Avenue, Clifton, New Jersey.

Block Trimmer

P ICTURED here is the Pony Jr. block trimmer which is used for trimming the ends of masonry units. The cutting is done by striking the upper cutting blade holder with a heavy hammer. The unit cuts square or at any angle and weighs only 37 pounds with two 10-inch blades made of high grade tool steel. Besser Company, Alpena, Michigan.



September, 1956—CONCRETE



NOW YOU GET THE BEST FOR FAR LESS!



Costs only 1/4c per bag of cement

Cut your plasticizer costs to the bone with XL-100 dry powder. It weighs less — goes farther and does a better job. New process brings you a plasticizer that acts faster, takes 1/3 the amount (by weight) and does a superior job. Concrete blocks are shades whiter, denser and outside surfaces have smoother texture. Increase contractor, builder satisfaction — deliver a better block for less than 1/4c per bag of cement. Investigate Forrer's XL-100 today!



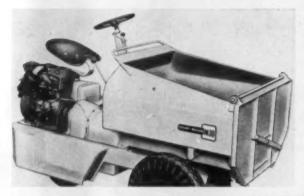
COMPARE

SEE THE AMAZING DIFFERENCE!
Forrer's XL-100 is a dry hydrated powder with wetting and dispensing agents. It's easy to use and economical too — costs but 1/4c per bag. Free sample on request

Division of SPRAY-O-BOND CO., 2225 N. Humboldt Ave., Milwaukee 12, Wisc.



EQUIPMENT & MATERIALS

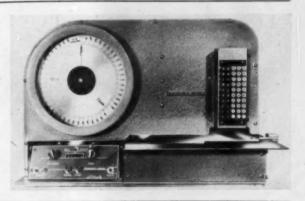


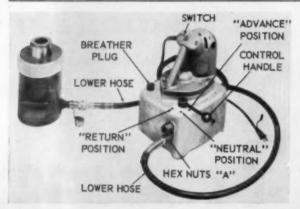
Materials Handling Truck

P ICTURED here is a new 18-cubic-foot, 1½-ton capacity construction materials handling truck with torque converter drive. This is the first truck of its kind for the construction field, according to the manufacturer, that incorporates a hydraulic torque converter. The new truck has a top speed of 12 miles per hour, over-all width with bed is 42 inches, and over-all length is 88½ inches. Height to top of bulk bed is 42 inches. The Prime-Mover Company, Muscatine, Iowa.

Weighing Instruments

EMPLOYING electronic load cells, a complete line of weighing instruments has been developed that are said to assure accuracy, faster weighing plus the convenience of remote weight indication. Two basic types of electronic scales are available. Full electronic in which load cells replace the conventional lever systems and Levetronic in which a conventional lever system is used but with a load cell hooked in tension in the steelyard rod. The Levetronic system can be used to convert existing full mechanical scales to electronic weighing and instrumentation. Fairbanks, Morse & Company, 600 S. Michigan Avenue, Chicago, Illinois.





Power Pump

A SUBSTANTIAL increase in the operating speed of hydraulic jacks and pullers is said to be achieved with this electric hydraulic power pump. The new unit, know as No. 798 CO, will raise a 60-ton capacity Simplex "Re-Mo-Trol" ram 5 times faster than a hand pump — lifting the ram 1-inch in half a minute compared to 2 minutes with a hand pump. It has a built-in ½-hp. 115V 60 cycle AC/DC universal motor and a two-speed automatic changeover. Templeton, Kenly & Company, 2525 Gardner Road, Broadview, Illinois.

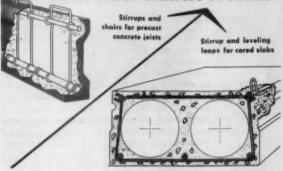
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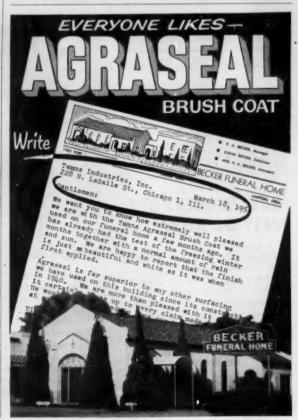


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THE EDITOR'S PAGE

WILLIAM M. AVERY

Brickbats - Clay, That Is

THE FEDERAL TRADE COMMISSION, prompted by heaven-only-knows what exercise in obscure reasoning, has decided that a material may not be advertised and sold as brick unless it is clay brick and unless it conforms to a definition which FTC and the Structural Clay Products Institute evidently believe can only be met by ckey brick. While we doubt that this bit of bureaucratic myopia will seriously harm the concrete products industry, or prove to be a boon to the clay products industry, we nevertheless believe that the thinking behind it deserves to be roundly condemned.

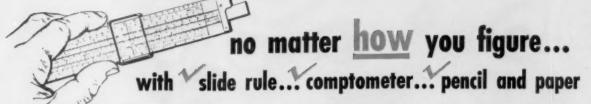
In attempting to define what can legitimately be sold or advertised as "brick" or "structural tile," FTC has pontificated that the material must be made primarily of clay or shale, or a mixture of both, and it must be fused together as a result of the application of heat. Just off hand, we'd say that there are holes in that definition big enough to throw the entire Department of Commerce through, and maybe it isn't a bad idea at that.

For example, the Federal Trade Commission would seem to be quite unaware that a generous share of the concrete products being manufactured today are made primarily of clay or shale — in an expanded form which is the direct result of fusion caused by the application of heat. Or that the binder used in concrete products, namely portland cement, is itself the product of a fusion (or sintering) process which is also a result of the application of heat.

But even if the FTC ruling represented acceptable semantics, which it does not, it would still rate as mighty poor logic. For all these learned gentlemen had to do to clear up the situation, if there was a situation to begin with, was to ask everyone involved to specify what kind of brick he was offering to sell. Indeed, if the clay brick people are really convinced that theirs is the superior product, then they themselves should lose no opportunity to make clear that what they manufacture is clay brick, and not some other kind. Otherwise, will they not expose themselves to the reverse of the nonsensical claim which prompted them to appeal to FTC in the first place — namely, that by concealing the precise identity of their products they seek to delude the customer into believing he is buying genuine concrete brick?

We are inclined to doubt that the FTC ruling will have the slightest effect on the nomenclature of the concrete products industries, or on advertising and selling practices. So perhaps from one point of view the makers of concrete brick can dismiss the entire matter as inconsequential. A longer look compels us to believe that prompt and vigorous action should be taken to have the ruling set aside.

FTC's brick decree was sought by representatives of one industrial group to obtain an advantage over another, and regardless of its immediate effect, its whole intent is to accomplish precisely what fair-trade-practice rulings are supposed to prevent. The principle is important even if the subject matter is not.



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The STEARNS ELECTRO MATIC

...with the newest <u>proven</u> concept of power application in block machines...

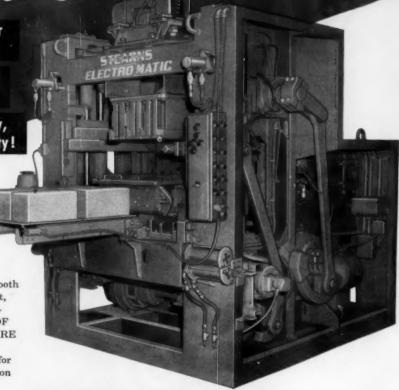
for faster cycling!

... <u>Designed</u> and <u>built</u> for high speed operation!

...For a faster cycle, without machine abuse!

...For higher productivity, without sacrifice of quality!

We invite your comparison ... See it! ... WATCH EVERY MOTION of each phase of the cycle for the ease and speed of operation, without the use of cams, open gears or pinions . . . watch the smooth sequence operation and, uppermost, check the quality of the block produced. And remember! MOLDS OF OTHER MANUFACTURERS ARE EASILY ADAPTED TO THE ELECTROMATIC. Write today for illustrated folder and the installation nearest to you.



STEARNS MANUFACTURING COMPANY INC.

ADRIAN, MICHIGAN, U.S.A.

COMPLETE CONCRETE PRODUCTS PLANT EQUIPMENT

Besser 8-Star Promotion of CONCRETE BLOCK



Concrete Masonry Advertisements in Architectural and Building Publications.



28 Page Concrete Masonry Insert in Sweet's Architectural File.



Permanent Exhibit in National Housing Center, Washington, D. C.



Permanent Exhibit in Architects' Samples Corporation Building, New York City.



Exhibit Display Units for Home Shows, Conventions, etc., loaned to block plants.



Plan Books illustrating 225 Block Masonry Homes.



Series of 26 Newspaper Ads to help Sell Concrete Masonry to the big Home Market.



Cooperative Advertising Material, including Home Builders' Booklet . . . Jumbo post cards in full color . . . Biotters . . . Match Books . . . Bulletins . . . Radio scripts . . . Movie films . . . etc.



You not only want to produce block...you want to sell block, The Besser Company helps you to do BOTH!

Through the medium of architectural and building publications, radio, newspapers, exhibits and a great variety of promotional material, the Besser Company is carrying the torch for the Block Industry. We are sincerely striving to get Mr. Public sold on the merits of Concrete Masonry.

Besser provides the world's leading machine for making block, plus the necessary "tools" for selling the block. This twofold program results in a solid foundation for progress for all VIBRAPAC Block Plants.



A portion of the Besser Company's permanent exhibit at the National Housing Center, Washington, D. C., Shows many new and interesting concrete masonry wall patterns.



Besser Exhibit at the Architects' Samples Corporation, New York City. Presented to the Architectural Profession by the Besser Company to suggest design in concrete masonry.

A 8927-1PBC

BESSER COMPANY

World's Leading Manufacturer of Concrete Block Machinery

ALPENA, MICHIGAN, U.S.A.